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# Monthly Labor Review

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3

Transit Prices and Demand

Moonlighting in 1963

Personnel Procedures in Southern Plants

Prevalence of Incentive Plans

UNITED STATES DEPARTMENT OF LABOR

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# Monthly Labor Review

UNITED STATES DEPARTMENT OF LABOR • BUREAU OF LABOR STATISTICS

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LAWRENCE R. KLEIN, *Editor-in-Chief*

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# This Issue in Brief . . .

"MOONLIGHTING," or multiple jobholding, sometimes has a reproachful connotation, but the practice seems to be increasing. As reported in *Multiple Jobholders in May 1963* (pp. 249-257), one of a series of BLS reports on the labor force, the total of "moonlighters" in that month was 3.9 million, or 600,000 more than a year before—the most significant annual increase since the July 1956 survey. The authors—Forrest A. Bogan and Harvey Hamel (both of the Division of Population and Labor Force Studies)—doubt that the job opportunities appropriated by spare-time workers are the kind that would appreciably benefit the unemployed or underemployed persons of inadequate means.

WHAT ENCOURAGES an industry to use an incentive wage system? In pursuit of an answer, Robert B. McKersie (Graduate School of Business, University of Chicago) and coauthors Carroll F. Miller, Jr., and William E. Quarterman, in *Some Indicators of Incentive Plan Prevalence* (pp. 271-276), scrutinize some of the conditions of production commonly held to invite incentive devices, and come to an overall conclusion that certain factors indeed are associated with a higher or lower incidence of incentive practice. Interestingly enough, they also find that "While many unions . . . officially oppose incentives, in practice they accept them and . . . often . . . object to their abandonment. Their main concern is with speedups. . . ."

Using refined statistical scalpels and probes, Professor H. Ellsworth Steele and Homer Fisher, Jr. (of Auburn University) in *A Study of the Effects of Unionism in Southern Plants* (pp. 258-270) dissect 25 personnel practices reported in a 1962 survey to assess the impact of organization on 992 southeastern firms. Although the southern experience with respect to unions and incentive systems ("... unions do complicate management's drive for higher labor productivity") appears to differ somewhat from the McKersie findings, the authors find several offsetting gains frequently associated with unionization, as well as a number of

indirect effects consonant with modern personnel management philosophy.

IN *Demand and Trends in Prices for Urban Transit* (pp. 277-284) Geoffrey Faux (Office of Prices and Living Conditions) reminds us that, between 1950 and 1963, transit fares almost doubled as the general retail price level rose by only about one-fourth. What happened was that spreading auto ownership and the growth of the suburbs caused the off-peak-hour passengers to decline, the transit industry's revenue to drop, and the fares inevitably to rise. The cycle continues. Urban transit fares will probably continue to rise until the overall problem—by now a public one—of urban transportation is resolved.

Following are some recent key statistics from continuing BLS series. See *Current Labor Statistics*, pp. 359-376.

	February	1964	1963
Total civilian labor force (in thousands).....	72,527	71,275	
Employment.....	68,002	66,358	
Unemployment.....	4,524	4,918	
Unemployment rate (seasonally adjusted).....	5.4	6.1	
January			
Earnings of production workers in manufacturing (preliminary):			
Average hourly earnings.....	\$2.51	\$2.43	
Average weekly hours.....	40.3	40.0	
Average overtime hours.....	2.7	2.5	
January			
Index of average hourly earnings of production workers in manufacturing (excluding overtime and interindustry shifts) (1957-59=100).....	117.6	114.0	
Consumer Price Index (1957-59=100):			
Revised series (including single workers).....	107.7	-----	
Revised series (excluding single workers).....	107.7	-----	
Old series (excluding single workers).....	107.6	106.0	

THE 1964 ANNUAL REPORT of the Council of Economic Advisers provided background material for the administrative campaign against poverty. Excerpted from chapter 2 of this report, *Poverty in America* (pp. 285-291) discusses the nature and extent of the problem and outlines steps which would contribute toward its solution. Annual income of \$3,000 is the statistical point thought to market the upper limit of poverty, but it is suggested that action not be limited to crash programs to create jobs and provide immediate assistance. "... the major thrust of our campaign must be against causes rather than symptoms," says the CEA.

# The Labor Month in Review

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## Work Rules Controversy in Perspective

THE DETAIL AND THE COMPLEXITY of the maneuvers of the railroad brotherhoods and the carriers often obscure for the public at large the critical nature of the work rules dispute for the parties involved.

The campaign did not begin in 1959 when the railroads made specific negotiation proposals for eliminating what they alleged was featherbedding that cost them \$½ billion a year. One example reached national attention during World War II.

The profitable Toledo, Peoria, and Western Railroad, although only 239 miles long, was an important freight link between Eastern and Western roads. An account of the TP&W's difficulties in Harper's Magazine of July 1947 reported some details of the negotiations for a contract:

... If a train crew was compelled to lay over at one end of the line before beginning its return trip, the men wanted pay for their idle hours; McNear [George P. McNear, the TP&W's owner] refused. Again, if a train arrived at Peoria from Effner in 5 hours, McNear wanted to send the same crew on west to complete their 8-hour day; the men objected that their homes were in Peoria and they'd already made their day's mileage. Railroaders' pay is based on both hours and mileage; McNear wanted to drop mileage from the formula, paying for an 8-hour day regardless of the miles covered. (The formula goes back perhaps half a century, when a hundred miles was a day's run, which made the formula profitable for the owners.) The union argued that the rules were in force on all other comparable railroads.

McNear changed the rules and pay rates in the fall of 1941, and the brotherhoods struck. Finally the railroad was seized and run by the Federal Government until the end of the war. The brotherhoods walked out when McNear took over again. During the next 2 years, Peoria was the center of violence in which strikebreakers, hired gunmen, the strikers, all were caught up. The strike was settled with an agreement similar

to those on other railroads after McNear's death in March 1947 from a shot by an unknown gunman.

ANOTHER MILESTONE in the national work-rule controversy passed during February, with the end not yet in sight. On February 20, the U.S. Court of Appeals for the District of Columbia held that the award of the special arbitration board created by Congress in August 1963 to settle key issues of the dispute "... is valid; that Congress had the power to order the arbitration; and that the board had acted lawfully within the orbit of authority delegated to it." The four unions which challenged the award said they would appeal to the U.S. Supreme Court.

The award, which was to have been effective January 25, 1964, provided for changes in work rules that would allow the eventual elimination of more than 30,000 fireman jobs and 19,000 other yard and road workers. Under it the railroads could lay off about 3,500 firemen now; jobs of the remainder would be abolished by attrition.

The carriers had agreed not to put the fireman award into effect during the unions' legal test of the award. The unions, which were freed on February 25 of the joint resolution's 6-month prohibition against striking over the other issues in dispute, let that day pass unnoticed.

The five operating brotherhoods appear to be going through a period of regrouping and changes in tactics. Reports of new proposals for settling the issues by several operating brotherhoods circulated during February. The Brotherhood of Railroad Trainmen notified the carriers on February 17 of its intent to discontinue industry-wide bargaining and return to individual negotiations with each road. In early March, the operating brotherhoods sent letters to the management of the Louisville and Nashville and the Southern Pacific roads, asking for separate meetings on their demands for contract improvements.

Southern Pacific had signed a job protection agreement with the Brotherhood of Railway Clerks on March 16, 1963, providing that jobs would be eliminated only through attrition. In October 1961, when Southern Pacific members of the Railroad Telegraphers were facing transference of work to other crafts, general force reductions, and the threatened closing of little



used stations, the union had won an agreement that no more than 2 percent of a specified number of jobs could be abolished in any year, as well as certain other protections.

IF THE RAILROADS were to reduce the number of firemen in accordance with the special arbitration board's award, they would still be faced in 15 States with what are known as full crew laws. Adopted in most cases before 1920 as safety measures, their requirements have always been controversial and have been criticized in recent years as uneconomic and unnecessary in operating with modern equipment. Some require a minimum number in the crew, regardless of the length of the train; others make the minimum dependent on the consist of the train, a standard that is likewise variable among the States.

On March 5, Mississippi repealed its full crew law requiring five men, including a fireman, on all freight trains operating more than 50 miles within the State. Among the States where repeal legislation is pending are New York and California. Full crew laws or regulations are also in effect in Arizona, Arkansas, Indiana, Maine, Massachusetts, Nebraska, Nevada, North Dakota, Ohio, Oregon, Texas, Washington, and Wisconsin. In addition, other States have from time to time issued regulations with the effect of such legislation.

BECAUSE OF THE VIOLENCE which has accompanied it and national defense implications, the dispute between the 572-mile Florida East Coast Railway and its nonoperating employees received more press attention than the nationwide controversy over changes in the size of the railroad operating work force.

When a Government-owned railroad spur at Cape Kennedy was to be opened early in February for the use of the railroad, picketing was extended to the Cape. The unions, which were temporarily enjoined from picketing, agreed to arbitrate, but Edward Ball, chairman of the board of Florida East Coast, rejected the Government's proposal for arbitrating the dispute. Attempts by Federal mediators to bring the parties together have so far had no results.

The dispute began during the last national wage negotiations for nonoperating employees. The Florida East Coast Railway walked away from those negotiations in February 1962. In settle-

ment with the other carriers in June 1962, recommendations of a presidential emergency board led to a 10.28-cents-an-hour-increase for workers represented by the nonoperating brotherhoods. On January 13, 1963, some 1,300 nonoperating employees of the Florida railroad struck over failure to reach a new wage agreement, and about 500 operating employees have observed their picket lines.

Although wages triggered the dispute, it has acquired other overtones. Not attempting to put passenger trains back into service, the road has continued its freight service with 250 supervisory personnel and 500 newly hired workers. W. L. Thornton, vice president of the railroad, says that the railroad is running more efficiently with fewer employees. Strikers say necessary maintenance and safety precautions are being neglected.

On March 2, a U.S. district court ordered the Florida East Coast, in line with the requirements of the Railway Labor Act, to reinstate the wage and working conditions in effect on the road prior to the appointment of a Presidential Emergency Board in the fall of 1963. Noting that in addition to making sweeping changes in work rules, the FEC abolished a union shop clause in the contract, the court ruled that the contract is still in effect, that the dispute is still in the hands of the National Mediation Board, and that as long as this is so, the status quo on rules must be maintained. The Florida East Coast contends that there is no contract now and it will appeal.

AS THE NONOPERATING DISPUTE on the Florida East Coast remained unsettled, 11 principal nonoperating unions had begun their next round of new contract proposals in national bargaining. A pattern increase has generally prevailed since before World War II for these unions, but wage demands made in the fall of 1963 reveal a diversity of proposals, both among the different unions and for various crafts within a union. For the first time, work rules for the nonoperating workers, which, for the most part, have been the product of long years of negotiations between individual carriers and unions, will be the subject of national negotiation, as the carriers attempt to make changes they consider necessary to take full advantage of technological developments and make the roads competitive with other types of transportation.

# Special Labor Force Report

EDITOR'S NOTE.—*The following article is one in a series of reports on special labor force subjects. Other articles in this series cover such subjects as employment of high school graduates and dropouts, work experience of the population, job mobility, and marital and family characteristics of workers. Reprints of all articles in the series, including in most cases additional detailed tables and explanatory notes, are available upon request to the Bureau or to any of its regional offices.*

## Multiple Jobholders in May 1963

FORREST A. BOGAN AND HARVEY R. HAMEL\*

A SHARP INCREASE in the number of "moonlighters" took place between May 1962 and May 1963 according to the latest national survey of multiple jobholders.<sup>1</sup> A total of 3.9 million persons held two jobs or more in May 1963, 600,000 more than in May 1962. This was the first significant increase in extra jobholding recorded since the July 1956 survey. About half of the increase was among persons who operated a farm or business on the side or did professional or managerial work as their second job.

The number of persons holding more than one job has fluctuated between 3 million and 3.9 million in the annual surveys conducted since 1956. Because in some cities or business concerns "moonlighting" is prohibited for public officials and certain other workers, a count of such persons obtained from interviews is subject to greater response error than a count based on other types of reporting. The number of multiple jobholders, therefore, must be regarded as an approximation.

Persons whose main jobs were in agriculture, public administration, education, or mining were more likely than those in any other industry group to have extra jobs, and most of the extra jobs

themselves were concentrated in the service and trade industries and in self-employment. Among the occupations, protective service workers, professional and sales (other than retail trade) workers, farmers, and craftsmen had the highest rates of dual jobholding.

Typical examples of dual jobholders are the government professional who teaches or tutors evenings or weekends, and the auto mechanic who operates his own farm. Situations like the latter, where the "moonlighter" is his own boss on one job, are common because the worker can adjust the hours of his self-employment to suit his own working schedule.

\*Of the Division of Population and Labor Force Studies, Bureau of Labor Statistics.

<sup>1</sup>This article is based primarily on information from supplementary questions in the May 1963 monthly survey of the labor force, conducted for the Bureau of Labor Statistics by the Bureau of the Census through its Current Population Survey. The data relate to the week of May 12 through 18.

Previous survey findings were published in the *Monthly Labor Review* issues of October of 1960 and 1961, and May 1963, and reprinted with additional tabular material and explanatory notes as Special Labor Force Reports Nos. 9, 18, and 29, respectively.

For purposes of this survey, multiple jobholders are employed persons who, during the survey week, (1) had jobs as wage or salary workers with two employers or more, (2) were self-employed and also held a wage or salary job, or (3) worked as an unpaid family worker but also had a secondary wage or salary job. Also included as multiple jobholders are persons who changed from one job to another during the survey week. This group was measured in the December 1960 survey and was found to be very small—only 2 percent of all multiple jobholders.

Persons employed only in private households (as a maid, laundress, gardener, babysitter, etc.) who worked for two employers or more during the survey week were not counted as multiple jobholders. Working for several employers was considered an inherent characteristic of private household work rather than an indication of multiple jobholding. Also excluded were self-employed persons with additional farms or businesses as unpaid family workers.

## Increase in Multiple Jobholders

Total employment rose only about 1 percent between May 1962 and May 1963, but in the first major rise in multiple jobholding recorded in 7 years, extra jobs rose by 17 percent. Even with this increase, however, only 5.7 percent of American workers had more than one job in 1963 compared with 4.9 percent in 1962. The rate of dual jobholding increased both for workers with primary jobs in agriculture and those in nonagricultural industries. In previous surveys, changes in dual jobholding rates appeared to be related to the amount of farm activity but this year's net increase is wholly due to a rise in the number of nonfarm wage and salary workers with two jobs. The rise from 6.7 percent to 7.5 percent for persons with farm jobs took place as total farm employment was declining; there was no change in the number of agricultural workers holding extra jobs. On the other hand, the increase in the rate of multiple jobholding for nonagricultural workers, from 4.7 percent to 5.5 percent, reflected an over-the-year increase of 600,000 in the number holding extra jobs.

Workers whose main jobs were in durable goods manufacturing, retail trade, and service industries (such as education and business and repair services) accounted for 75 percent of the increase in the number of nonfarm workers with extra jobs, but they were only half of all nonfarm dual jobholders.

Expansion of secondary jobs was concentrated in industries which generally account for most such openings. Self-employed persons who operate their own farms, businesses, or professions on the side made up nearly half of the net rise in multiple jobholders (farmers 30 percent, nonfarm 15 percent), and another 40 percent were wage and salary workers in service and retail trade establishments.

The chart shows that, on an occupation basis, the rise was disproportionately high among workers from three occupation groups—craftsmen, operatives, and service workers, but on the second jobs, most of the growth was among self-employed farmers and among persons holding sales or service jobs.

Men made up 81 percent of the increment in the number of dual jobholders, a ratio about equal

to their proportion among all such persons, and the rate of extra jobholding by men advanced by a full percentage point from the 6.4 percent of May 1962.

As would be expected, the increment in extra jobholding was primarily among adult men, mainly those who were married, and the distribution of dual jobholders by age did not change significantly over the year. The increase in multiple jobholding rates was about as much for nonwhites as for whites.

The level and rate of multiple jobholding does not show any significant relationship to either cyclical or seasonal changes in unemployment. As the rate of unemployment increased sharply between July 1957 and July 1958, a survey taken in the latter month<sup>2</sup> revealed a slight decline in the proportion of all employed persons on secondary jobs and in the number in nonfarm employment. However, the dual jobholding rate and the number of nonfarm secondary jobs remained unchanged between December 1959 and December 1960 although unemployment rates rose. Between May 1962 and May 1963, unemployment rates remained virtually unchanged for adult workers who accounted for all but 200,000 of the dual jobholders in the latter month, but a significant rise occurred in both the overall dual jobholding rate and in nonfarm jobs held by these persons. Prior to the latest survey, multiple jobholding rates changed little over the years even among workers whose primary employment was in manufacturing, an industry in which employment is particularly sensitive to cyclical fluctuations; in May 1963, however, the rate was one-fifth more than a year earlier.

## Personal Characteristics

The total number of men employed in May 1963 exceeded the number of women by 2 to 1, but among dual jobholders men outnumbered women by 6 to 1; thus their rate of "moonlighting" is three times as great as that for women, 7.4 percent and 2.4 percent, respectively, as shown in the tabulation on the following page.

<sup>2</sup> *Current Population Reports*, Series P-50, No. 88 (U.S. Bureau of the Census), 1959.



	Persons with two jobs or more			
	Male		Female	
	Number (thou- sands)	Percent of em- ployed	Number (thou- sands)	Percent of em- ployed
Total, 14 years and over-----	3,351	7.4	570	2.4
14 to 19 years-----	143	4.7	56	2.7
20 to 24 years-----	291	7.2	59	2.2
25 to 44 years-----	1,779	8.8	255	2.7
45 to 64 years-----	1,035	6.5	189	2.2
65 years and over-----	103	4.9	11	1.2

The highest rate, 8.8 percent, was among men 25 to 44 years old, a large proportion of whom are married, with the responsibility of earning all they can to support young families. Since wives of men in this age group are less likely to be in the labor force than are older married women, family income can sometimes be augmented only by the husbands' extra jobs. Dual jobholding rates among men were lowest—only 5 percent—for those 65 years old and over, many of whom are either physically unable to hold down two jobs or do not have the economic compulsion to seek a second job, and for teenagers, many of whom go to school and can hold down one job at most.

As in the past three surveys, married men living with their wives were twice as likely to be holding down two jobs as single men, 8.2 percent and 4.4 percent, respectively. Among women, however, the 2.2-percent rate for those who were married was about the same as for single women, in contrast to earlier years when wives had a somewhat lower rate. The dual jobholding rate for all white workers was not significantly different from that for nonwhite workers, 5.7 percent and 5.2 percent, respectively.

## Industry

About 71½ percent of all persons employed in agriculture had an extra job in May 1963 as compared with 11.2 percent in July 1956. Over this period, the proportion of multiple jobholders with a main job in agriculture fell to 1 out of 10 from 1 out of 4. The reduction in the number of farm workers among those who had more than one job reflects not only the secular downtrend in employment on farms but also a possible difference between May and July in the extent of multiple jobholding among farm workers. In addition, many persons who were formerly classified as farmers are not included among nonfarm workers since they work a longer number of hours on their

nonfarm job than at their farm chores. The decline in agriculture has also resulted in cutting in half the proportion of dual jobholders who were self-employed on their primary job, from 22 percent to 11 percent over the 7-year period (table 1). In July 1957, the earliest year for which comparable data are available, about two-thirds of the 600,000 self-employed persons with extra jobs were farmers on their main job but by May 1963, they comprised only half of the 350,000 self-employed dual jobholders.

Among nonfarm wage and salary workers, public administration workers were more likely to be holding extra jobs than workers in any other major industry group (table 2). Their rate of multiple jobholding was 10 percent, with the proportion reaching 15 percent for postal workers. The work schedules of postal employees and other workers employed in public administration (e.g., firemen, policemen, and other government employees) often make it possible for them to work at a second job during off hours. Professional workers in public administration frequently find

## Increase in Multiple Jobholding by Occupation of Primary and Secondary Job, May 1962 to May 1963

### ON PRIMARY JOB...

65 percent of the expansion in multiple jobholding was among craftsmen, operatives, and service workers...



who made up less than half of all multiple jobholders in May 1963.



### ON SECONDARY JOB...

60 percent of the increase was among farmers, service, and sales workers...



who were less than 40 percent of all multiple jobholders in May 1963.



0 25 50 75 100  
PERCENT



TABLE 1. INDUSTRY AND CLASS OF WORKER OF EMPLOYED PERSONS WITH TWO JOBS OR MORE, 1956-63

[Percent distribution]

Survey date	Persons with two jobs or more										
	Total			Industry				Class of worker			
	Number (thou- sands)	Percent of all employed persons	Percent	Primary job		Secondary job		Primary job		Secondary job	
				Agricul- ture	Nonagri- cultural industries	Agricul- ture	Nonagri- cultural industries	Wage and salary	Self-em- ployed <sup>1</sup>	Wage and salary	Self-em- ployed
May 1963.....	3,921	5.7	100.0	9.8	90.2	21.0	79.0	89.4	10.6	68.1	31.9
May 1962.....	3,342	4.9	100.0	10.9	89.1	19.3	80.7	85.8	14.2	70.4	29.6
December 1960.....	3,012	4.6	100.0	11.0	89.0	19.5	80.5	85.9	14.1	71.7	28.3
December 1959.....	2,966	4.5	100.0	10.8	89.2	21.9	78.1	86.1	13.9	68.7	31.3
July 1958.....	3,099	4.8	100.0	20.3	79.7	27.4	72.6	81.3	18.7	73.2	26.8
July 1957.....	3,570	5.3	100.0	24.0	76.0	29.0	71.0	76.5	23.5	75.4	24.6
July 1956.....	3,653	5.5	100.0	23.7	76.3	30.4	69.6	78.4	21.6	73.6	26.4

<sup>1</sup> Includes a small number of unpaid family workers.

opportunities for extra employment because of their education, skills, and experience.

Although the rate of extra jobholding for factory workers was not higher than that for all industry groups taken together, they made up about one-fourth of all multiple jobholders. Of every 10 such workers with a main job in manufacturing, only 1 had a second factory job, 4 were operating their own farms or businesses, and more than 3 had jobs in service or trade industries.

Other groups of workers most likely to hold extra jobs include those from such diverse industry groups as educational services; business and repair services; transportation and public utilities; construction; and forestry, fisheries, and mining. Like public administration workers, those employed in educational services, mainly teachers, have a work schedule well suited to extra employment. Other factors probably accounting for their high incidence of multiple jobholding are the training and skills of teachers and their aspirations for a standard of living in keeping with their professional status. In the construction industry, working for more than one employer during the week is a matter of course. Retail trade workers, many of whom work part time because they are not available for full-time jobs, were less likely to have supplementary employment.

The industries in which "moonlighters" found their second jobs were typically those providing opportunities for part-time work. About two-thirds of nonfarm wage and salary workers worked in service industries and in retail trade

establishments; only about 40 percent worked in these industries on their primary jobs. Although workers in forestry, fisheries, and mining; transportation and public utilities; and public administration were more likely than the average workers to have extra employment, these fields were not important sources of second jobs.

The majority of dual jobholders (2.3 million) were wage and salary workers on both jobs in May 1963. This total included 2.1 million workers with two jobs in nonagricultural industries, and 133,000 who combined an agricultural with a nonagricultural job; the remainder—49,000—worked exclusively in agriculture (table 3). Altogether, 1,600,000 persons combined wage work with a profession, business, or farm enterprise. Usually, self-employment is the extra job and a wage or salary job is the main source of income, since 1,250,000 of this total were wage workers on their primary job. Only 350,000 were proprietors or operated their own farms on their main job, and had an extra wage or salary job (table 3).

A large number of workers whose primary job was in nonfarm self-employment were proprietors of businesses, but many others were self-employed professional and technical workers, carpenters, and mechanics, whose training and skills probably increase their opportunities for extra employment.

### Occupation

As in prior surveys, professionals and farmers continued to have high rates of multiple jobhold-

ing—between 7 and 8 percent. This year, for the first time, equally high rates were found among carpenters and other construction craftsmen, drivers and deliverymen, and sales workers (other than those in retail trade) (table 4). The high rates for men who were elementary and high school teachers (18.7 percent) and firemen, policemen, and other protective service workers (14.2 percent) have been observed in past surveys. The lowest multiple jobholding rate for men in any major occupational group was for managers, officials, and proprietors, many of whom regularly work long hours on their primary jobs.

In the 1963 survey, differences persisted between the occupational distributions of dual jobholders on their primary and secondary jobs. Three times as many persons owned or managed farms on their extra jobs as were farmers on their first. The disproportionate number of farmers on second jobs was probably accounted for by those who, because of relatively low income, obtained a regular

nonagricultural job in order to maintain as far as possible a farm way of life. Only about 1 out of 5 of the workers in secondary jobs were craftsmen or operatives compared with 1 out of 3 on primary jobs. Twice as many men were retail salesmen on secondary as on primary jobs, reflecting the large number of part-time jobs available in stores, for house-to-house salesmen, and for other retail sales positions. And only one-third as many persons were teaching below the college level on secondary as on primary jobs.

In May 1963, as in previous multiple jobholding surveys, 3 out of 10 persons with two jobs worked in the same occupation group on their first and second jobs (table 5). As usual, about half the workers in the professional occupation group, which includes accountants, entertainers, musicians, nurses, and technicians, as well as elementary and secondary school teachers, found extra employment in the professional field but they did not always use their primary skill.

TABLE 2. INDUSTRY GROUP AND CLASS OF WORKER OF PERSONS WITH TWO JOBS OR MORE, 1957-63

Industry and class of worker	Persons with two jobs or more							
	Percent distribution, May 1963		As percent of all employed persons in industry of primary job					
	Primary job	Secondary job	May 1963	May 1962	December 1960 <sup>1</sup>	December 1959	July 1958	July 1957
All industries.....	100.0	100.0	5.7	4.9	4.6	4.5	4.8	5.3
Agriculture.....	9.8	21.0	7.5	6.7	6.7	6.7	9.3	11.0
Wage and salary workers.....	3.7	4.8	8.8	6.2	6.7	7.7	13.2	12.1
Self-employed workers.....	5.0	16.2	7.5	7.5	7.6	7.2	8.1	10.7
Unpaid family workers.....	1.1	(2)	4.8	5.2	3.6	2.5	6.9	10.0
Nonagricultural industries.....	90.2	79.0	5.5	4.7	4.4	4.3	4.2	4.6
Wage and salary workers.....	85.7	63.3	5.9	5.0	4.6	4.6	4.4	4.7
Forestry, fisheries, and mining.....	1.2	.3	7.8	7.6	5.6	7.7	5.4	6.7
Construction.....	6.2	5.1	6.8	6.7	5.6	5.7	6.6	5.9
Manufacturing.....	24.7	7.2	5.5	4.6	4.0	4.3	3.9	4.3
Durable goods.....	14.9	2.9	5.8	4.5	4.4	5.0	4.1	4.2
Nondurable goods.....	9.8	4.3	5.0	4.6	3.6	3.4	3.7	4.3
Transportation and public utilities.....	7.6	4.3	6.8	5.2	4.8	4.4	4.2	4.2
Wholesale and retail trade.....	12.7	16.2	4.8	3.7	3.9	3.2	3.9	3.9
Wholesale.....	3.1	1.7	5.9	4.7	4.9	3.8	4.5	4.1
Retail.....	9.6	14.5	4.5	3.4	3.6	3.0	3.7	3.8
Eating and drinking places.....	2.4	3.6	5.7	2.9	4.6	1.6	3.0	3.2
Other retail trade.....	7.2	10.9	4.2	3.5	3.4	3.3	3.9	4.0
Service and finance.....	24.1	25.7	5.6	4.7	4.8	4.6	3.9	4.6
Finance, insurance, and real estate.....	3.8	4.1	5.5	4.2	4.2	3.8	3.3	4.5
Business and repair services.....	2.4	3.0	6.9	4.2	5.0	4.2	5.3	4.7
Private households.....	1.1	3.3	1.7	1.9	1.6	2.1	1.4	2.3
Personal services, except private households.....	1.9	2.2	5.1	2.4	2.1	2.6	2.4	4.0
Entertainment and recreation.....	.8	3.5	5.8	7.3	8.8	7.5	10.5	9.7
Educational services.....	9.0	3.1	8.6	8.9	8.2	7.0	5.9	6.1
Professional services, except education.....	5.1	6.6	5.1	3.6	4.7	5.2	3.9	4.7
Public administration.....	9.3	4.6	10.2	9.7	7.7	8.6	7.1	8.4
Postal services.....	2.3	4.5	15.3	13.7	10.8	12.6	8.5	9.6
Other public administration.....	7.0	4.1	9.2	8.9	7.0	7.6	6.8	8.2
Self-employed workers.....	4.3	15.7	2.7	3.0	2.8	2.8	3.1	3.7
Unpaid family workers.....	.1	(2)	.9	2.9	1.1	2.0	2.2	3.9

<sup>1</sup> Data for Alaska and Hawaii included beginning 1960.

<sup>2</sup> Persons whose only extra job was as an unpaid family worker were not counted as dual jobholders.

NOTE: Estimating procedure made use of 1960 Census data for 1962-63 and 1950 Census data for 1957-60. Because of rounding, sums of individual items may not equal totals.

TABLE 3. TYPE OF INDUSTRY AND CLASS OF WORKER OF PRIMARY AND SECONDARY JOBS FOR PERSONS WITH TWO JOBS OR MORE, MAY 1963

[Numbers in thousands]

Type of industry and class of worker of primary job	Total employed	Persons with two jobs or more		Type of industry and class of worker of secondary job					
		Number	Percent of total employed	Agriculture			Nonagricultural industries		
				Total	Wage and salary workers	Self-employed workers	Total	Wage and salary workers	Self-employed workers
Total.....	69,061	3,921	5.7	825	188	637	3,096	2,481	615
Agriculture.....	5,178	386	7.5	140	98	42	246	241	5
Wage and salary workers.....	1,661	146	8.8	91	49	42	55	50	5
Self-employed workers.....	2,590	195	7.5	36	36	(1)	159	159	(1)
Unpaid family workers.....	928	45	4.8	13	13	(2)	32	32	(2)
Nonagricultural industries.....	63,883	3,535	5.5	685	90	595	2,850	2,240	610
Wage and salary workers.....	57,087	3,361	5.9	678	83	595	2,683	2,073	610
Self-employed workers.....	6,216	169	2.7	7	7	(1)	162	162	(1)
Unpaid family workers.....	580	5	.9	-----	-----	(2)	5	5	(2)

<sup>1</sup> Self-employed persons with a secondary business or farm, but no wage or salary job, were not counted as multiple jobholders.

<sup>2</sup> Persons whose primary job was as an unpaid family worker were counted as multiple jobholders only if they also held a wage or salary job.

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

Only a small proportion of male school teachers were also teachers on their secondary job; about half had other types of white-collar jobs.

In May 1963, craftsmen were just as likely to be farmers as craftsmen on their second jobs—28 percent found secondary employment in each occupation. Surveys taken in December of 1959 and 1960 showed that smaller proportions of skilled persons worked as craftsmen on both jobs, probably because outdoor construction work is cut back sharply during winter months. Operatives and kindred workers were also just as likely to be farmers as semiskilled workers. Relatively few nonfarm laborers worked in blue-collar secondary jobs other than their own, or in white-collar work, indicating the limited mobility of the worker with little training or marketable skills. By contrast, three-fourths of the professional and technical workers and three-fifths of the managers and proprietors, clerical, and sales workers had secondary jobs in the white-collar fields. Four out of 10 service workers, a group which includes hospital attendants, cooks, janitors, and waitresses, remained in service jobs on their secondary jobs, and about one-third of them moved into white-collar or skilled occupations. The majority of farm laborers stayed in farm work, including working for themselves, on their extra jobs. On the other hand, farmers found jobs in blue-collar work, especially as operatives, on about half of their secondary jobs.

## Hours of Work

Most of the multiple jobholders (68 percent) worked full time (35 hours or more) on their primary job, and part time on their extra job (table 6). Only a fourth of the persons with two jobs or more in May 1963 worked less than 35 hours on both their primary and secondary jobs. The combination of two full-time jobs was the least likely one for multiple jobholders (7 percent).

Part-time work on both jobs was much more prevalent among persons who were agricultural workers on their primary job than for nonagricultural workers. About half the farm wage workers with two jobs worked part time on each, compared with fewer than one-fourth of the nonagricultural wage workers. In nonfarm jobs, 7 out of 10 wage and salary workers had full-time primary jobs and worked part time on their second jobs. Full-time factory workers accounted for only one-third of the dual jobholders in this group.

The average (median) number of hours worked by multiple jobholders on both jobs was 52 hours in May, while persons with only one job averaged 39 hours during the survey week. The average second job was for 13 hours during the week. As would be expected, men worked longer than women, 13 hours as compared to 9 hours. About three-fourths of the dual jobholders but only one-third of workers with only one job worked 41



TABLE 4. OCCUPATIONAL DISTRIBUTION OF PERSONS WITH ONE JOB AND WITH TWO JOBS OR MORE, AND RATE OF MULTIPLE JOBHOLDING, BY OCCUPATION AND SEX, MAY 1963

Occupation group	Percent distribution			Persons with two jobs or more as percent of total employed in occupation group of primary job		
	Persons with one job	Persons with two jobs or more				
		Primary job	Secondary job	Both sexes	Male	Female
All occupations.....	100.0	100.0	100.0	5.7	7.4	2.4
Professional, technical, and kindred workers.....	11.8	16.4	13.7	7.8	10.0	3.7
Medical and other health workers.....	2.0	1.9	1.6	5.5	8.6	3.1
Teachers, except college.....	2.8	3.5	1.3	7.1	18.7	2.4
Other professional, technical, and kindred workers.....	7.0	11.0	10.9	8.6	9.1	6.3
Farmers and farm managers.....	3.6	4.9	16.1	7.7	8.0	3.5
Managers, officials, and proprietors, except farm.....	10.4	8.4	10.0	4.6	4.8	3.8
Clerical and kindred workers.....	15.0	10.0	7.3	3.8	8.7	1.7
Sales workers.....	6.4	5.9	8.0	5.3	7.6	1.8
Retail trade.....	3.9	2.4	4.8	3.6	6.5	1.6
Other sales workers.....	2.5	3.5	3.2	7.9	8.4	3.4
Craftsmen, foremen, and kindred workers.....	12.8	16.3	9.8	7.1	7.3	1.4
Carpenters and construction craftsmen.....	3.8	5.4	4.4	7.9	8.0	-----
Mechanics and repairmen.....	3.1	4.3	2.9	7.6	7.7	-----
Other craftsmen, foremen, and kindred workers.....	5.9	6.6	2.6	6.3	6.5	1.7
Operatives and kindred workers.....	17.9	17.5	12.2	5.5	7.2	1.2
Drivers and deliverymen.....	3.5	4.5	5.5	7.3	7.2	(1)
Other operatives and kindred workers.....	14.5	13.0	6.7	5.1	7.2	1.1
Private household workers.....	3.5	.8	2.1	1.3	(1)	1.2
Service workers, except private household.....	10.1	10.6	11.4	5.9	9.0	3.5
Protective service workers.....	1.1	2.8	1.5	13.6	14.2	(1)
Waiters, cooks, and bartenders.....	2.9	2.3	2.9	4.7	5.4	4.4
Other service workers.....	6.1	5.4	7.0	5.1	7.9	2.9
Farm laborers and foremen.....	3.3	4.4	4.0	7.5	8.2	6.2
Laborers, except farm and mine.....	5.3	4.7	5.3	5.1	5.2	(1)

1 Percent not shown where base is less than 100,000.

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

TABLE 5. MAJOR OCCUPATION GROUP OF SECONDARY JOB, BY MAJOR OCCUPATION GROUP OF PRIMARY JOB FOR PERSONS WITH TWO JOBS OR MORE, MAY 1963

[Percent distribution]

Major occupation group of primary job	Secondary job											
	All occupation groups	Professional, technical, and kindred workers	Farmers and farm managers	Managers, officials, and proprietors, except farm	Clerical and kindred workers	Sales workers	Craftsmen, foremen, and kindred workers	Operatives and kindred workers	Private household workers	Service workers, except private household	Farm laborers and foremen	Laborers, except farm and mine
All occupation groups.....	100.0	13.7	16.1	10.0	7.3	8.0	9.8	12.2	2.1	11.4	4.0	5.3
Professional, technical, and kindred workers.....	100.0	53.5	7.8	7.6	5.4	8.1	5.1	3.9	1.2	5.3	1.1	1.1
Farmers and farm managers.....	100.0	2.6	-----	10.8	9.3	3.1	14.9	24.2	1.0	8.8	17.5	7.7
Managers, officials, and proprietors, except farm.....	100.0	17.0	15.5	31.0	4.6	5.8	6.7	9.4	.6	5.8	2.7	.9
Clerical and kindred workers.....	100.0	7.1	8.2	10.2	28.6	13.0	3.3	12.2	2.0	11.7	1.0	2.6
Sales workers.....	100.0	10.3	10.7	15.9	8.2	24.5	1.3	9.4	4.3	9.9	.9	4.7
Craftsmen, foremen, and kindred workers.....	100.0	4.1	27.6	11.0	3.4	6.1	28.0	8.8	-----	6.4	1.6	3.0
Operatives and kindred workers.....	100.0	4.4	25.2	5.8	3.9	7.0	8.7	22.7	.7	13.7	2.2	5.5
Private household workers.....	(1)	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Service workers, except private household.....	100.0	4.3	10.6	6.3	7.5	5.3	7.7	11.3	6.5	31.1	1.2	8.2
Farm laborers and foremen.....	100.0	1.7	20.9	-----	1.2	2.9	2.9	15.1	11.0	5.2	32.0	7.0
Laborers, except farm and mine.....	100.0	2.2	23.1	2.7	2.7	5.4	5.4	9.1	-----	12.9	5.9	30.6

1 Percent not shown where base is less than 100,000.

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

hours or more during the survey week. However, dual jobholders constituted only 15 percent of all persons working over 40 hours a week in May 1963. Persons operating their own farms on the primary job worked longer on both jobs than any other group of workers—over 60 hours. At 48, the number of hours for those who managed their own businesses was below average. Part-time work on both jobs was much more common for these two groups than for other dual jobholders.

Dual jobholders whose secondary occupations were as craftsmen or operatives worked relatively long secondary hours (15), a fact which may reflect the greater than average number of hours worked in construction, transportation, and manufacturing industries. Extra employment in the professional and technical fields averaged only 10 hours, and for unskilled nonfarm jobs, 11 hours.

### Multiple Jobholders and the Unemployed

The rise in the past year in the number of persons holding two or more jobs suggests a reexamination of whether or not the extra jobs of the dual jobholders should be made available for unemployed workers. It is not possible to indicate definitely the number of these jobs that the job-

less workers might move into, because of the many factors which tend to inhibit direct meshing of the two. Furthermore, in examining the kinds of jobs held by dual jobholders, the number of hours they work on the second job, the occupations last held by the unemployed, and other factors, the conclusion is inescapable that only a very small proportion of the unemployed could or would take the supplemental jobs held by multiple jobholders.

Nearly all dual jobholders work relatively few hours at their second jobs, averaging only about 13 hours. About two-thirds of these workers were employed 14 hours or less during the survey week, and only 7 percent actually worked 35 hours or more, on their second jobs. Only about 150,000 (4 percent) of the multiple jobholders worked 35 hours or more on their second nonfarm wage and salary job. Information classifying the unemployed in terms of whether they were seeking full-time or part-time jobs was obtained in 1963 for the first time for a period in which multiple jobholders were also surveyed. The data indicate that 85 percent of the unemployed wanted full-time work. It is highly doubtful that many of the jobless persons could afford to accept a part-time job where presumably the average earnings

TABLE 6. PERSONS AT WORK ON TWO JOBS OR MORE, BY FULL- AND PART-TIME STATUS<sup>1</sup> AND MEDIAN HOURS WORKED, BY MAJOR INDUSTRY GROUP, MAY 1963

Industry and class of worker	Percent distribution of persons at work on both jobs, by full- and part-time status, <sup>1</sup> by industry of primary job				Median hours		
	Total	Full time on both jobs	Full time on primary job, part time on secondary job	Part time on both jobs	On both jobs, <sup>2</sup> by industry of primary job	On secondary job	
						By industry of primary job	By industry of secondary job
All industries.....	100.0	7.0	68.2	24.8	52	13	13
Agriculture <sup>3</sup> .....	100.0	11.4	44.3	44.3	54	13	13
Wage and salary workers.....	100.0	7.9	40.2	51.9	48	13	12
Self-employed workers.....	100.0	14.8	54.8	30.4	60	15	14
Nonagricultural industries.....	100.0	6.5	70.8	22.7	52	13	12
Wage and salary workers <sup>4</sup> .....	100.0	6.4	71.5	22.1	52	13	13
Construction.....	100.0	2.7	69.9	27.4	52	13	16
Manufacturing.....	100.0	7.2	79.7	13.1	54	14	14
Durable goods.....	100.0	6.5	84.2	9.2	55	14	(5)
Nondurable goods.....	100.0	8.2	72.7	19.1	53	14	13
Transportation and public utilities.....	100.0	5.9	72.8	21.3	54	14	16
Wholesale and retail trade.....	100.0	5.4	63.1	31.5	52	11	13
Service and finance.....	100.0	6.3	65.0	28.7	49	11	11
Public administration.....	100.0	9.0	77.9	13.1	52	14	10
Self-employed and unpaid family workers <sup>5</sup> .....	100.0	9.3	53.1	37.6	48	10	(7)

<sup>1</sup> Work weeks of 35 hours or more were counted as full time; those of less than 35 hours, as part time.

<sup>2</sup> Includes dual jobholders not at work on secondary job.

<sup>3</sup> Includes a small number of persons who were unpaid family workers on their primary job, not shown separately.

<sup>4</sup> Includes a small number of workers in forestry, fisheries, and mining, not shown separately.

<sup>5</sup> Median hours not shown where base is less than 100,000.

<sup>6</sup> Unpaid family workers comprise only a very small proportion of this group.

<sup>7</sup> Relates only to persons who were self-employed on secondary jobs. Persons whose only additional job was in unpaid family work were not counted as multiple jobholders.

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

TABLE 7. MAJOR OCCUPATION GROUP OF SECONDARY JOB FOR PERSONS WITH TWO JOBS OR MORE AND OF LAST FULL-TIME JOB FOR UNEMPLOYED PERSONS, MAY 1963

[Thousands of persons]

Major occupation group	Secondary job of persons with two jobs or more			Last full-time job of unemployed persons <sup>1</sup>
	Total	Self-employed on secondary job	Wage and salary on secondary job	
All occupations.....	3,921	1,252	2,669	3,267
Professional and technical, and managerial workers, except farm.....	931	361	570	260
Professional, technical, and kindred workers.....	539	148	391	159
Managers, officials, and proprietors, except farm.....	392	213	179	101
Farmers and farm managers.....	630	618	12	6
All other occupations.....	2,360	273	2,087	3,003
Clerical and kindred workers.....	288	16	272	390
Sales workers.....	315	67	248	171
Craftsmen, foremen, and kindred workers.....	386	104	282	372
Operatives and kindred workers.....	478	45	433	1,008
Service workers, including private household.....	529	25	504	524
Farm laborers and foremen.....	156	-----	156	90
Laborers, except farm and mine.....	208	16	192	448

<sup>1</sup> Data relate only to unemployed persons who at some time held a full-time civilian job for a period of at least 2 weeks.

are also low. Many secondary jobs are of short duration or are available only intermittently; about 10 percent of the dual jobholders did not work at their extra job during the survey week. If secondary part-time jobs held by persons who worked less than a full week on their primary job are excluded (about one-fourth of the total),

the number of secondary jobs available to the unemployed is further reduced.

Even if all the extra jobs were available to the unemployed, there are other problems which would have to be overcome. Not only must there be a matching of jobs which are usually held by men and by women, and willingness of unemployed workers to relocate to geographic areas where the secondary jobs are open, but the unemployed must also have the skills or physical abilities to fill available jobs. Jobless workers could not often step into the supplemental jobs of 1.6 million persons, either because the positions were created by the occupants for themselves or because the job requirements are too stringent. About 1,250,000 of all persons with more than one job were self-employed on the second job in May 1963, either as farmers, professionals, or businessmen (table 7). Relatively few of the unemployed could assume these responsibilities because they lack the required training, experience, education, or finances. An additional 570,000 persons with secondary jobs were employed in professional, technical, or managerial wage and salary jobs, but only 260,000 unemployed persons were in these occupation groups. It is highly improbable that many of the unemployed in other occupational categories could meet the training qualifications required for the remaining 310,000 professional or managerial jobs.



# A Study of the Effects of Unionism in Southern Plants

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ARE THERE DIFFERENCES in the personnel practices followed by union plants and by nonunion plants in the Southeast? Is collective bargaining associated with important differences in company practices in the areas of employment, safety, communications, labor productivity, and employee benefits? Are these differences the kind that would affect efficiency of business operation?

A comparison of the practices reported to us by a sample of union and nonunion plants in the Southeast indicates the impact which union organization has had upon personnel practices in the region. This study contrasts the practices of 309 organized and 672 unorganized plants located in Alabama, Florida, Georgia, Mississippi, North Carolina, South Carolina, and Tennessee. Basic data used in this report were gathered in a questionnaire survey made in 1962.<sup>1</sup> Additional information comes primarily from personal interviews and correspondence with plant officials, and from previous surveys of Southern plants made in 1952 and 1958-59.<sup>2</sup>

## Major Findings

This study indicates that the practices of organized southern plants differ in some important respects from those of unorganized plants in matters of employment, safety, communications, labor productivity, and fringe benefits. For many practices, however, little if any difference was discovered, and in some cases where differences were found, they seem to be attributable to differences in personnel specialization, size, location, or company structure, rather than to differences in unionization. To some extent, the differences revealed suggest that managers in union plants are under greater pressure to do a good personnel job than

managers in nonunion plants, particularly in those plants which are apparently secure from unionization.

Data presented show that the unionized plants surveyed make wider use of preemployment physical examinations for production workers than do the nonunion plants—possibly to avoid later disputes over injuries. They make about the same use as do the nonunion plants of the other employment practices studied.

The organized plants surveyed appear to place greater stress on safety practices, especially the provision of a nurse or doctor on the premises, than do the nonunion plants. Partial correlation analysis of 13 industries, however, shows usage of nurses and doctors to be related to the extent of personnel specialization rather than to the extent of unionization.

Each of the communications practices examined is used more widely by the union than by the nonunion plants included in the study. The greater use of formal grievance procedures and job posting is especially noteworthy. However, use of grievance systems in the 13 industries studied is correlated with personnel specialization and company structure, not unionization, and use of job posting is correlated with company structure and SMSA location.

The differences in practices reported by comparable union and nonunion plants studied support the argument that unions do complicate management's drive for higher labor productivity. Piecework and incentive systems, profit-sharing programs, and job evaluation systems are more widely used in the nonunion than in the union plants surveyed. Furthermore, seniority is reported to be a major factor in promotion by sub-

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<sup>1</sup> A random sample of 3,329 plants was drawn on a systematic basis from a universe of approximately 7,600 plants listed in State directories of manufacturing firms. Of this group, 992, or 43 percent, responded. As 11 responses did not answer the question concerning unionization, only 981 plants are included in this report. A sample of 1,067 would yield a 95-percent confidence interval of 3 percent, plus and minus. If the required interval were 4 percent, plus or minus, a sample of 600 would be needed. Plants were classified as union or nonunion on the basis of respondents' answers to the question, "Is your plant unionized in part or in whole?"

<sup>2</sup> See Steele, Myles, and McIntyre, "Unionism and Personnel Practices in the Southeast," *Industrial and Labor Relations Review*, January 1955, for a report of the 1952 study. The second survey covered 171 organized and 220 unorganized plants in 12 southern States, including in addition to the 7 States surveyed in 1962, Arkansas, Louisiana, Texas, Virginia, and West Virginia.



stantially more union than nonunion plants. Finally, responding plants which have profit-sharing programs are much less likely to include production workers within their scope if the plant is organized than if it is not organized. On the other hand, seniority is widely used by nonunion plants, and interview impressions suggest that its adverse effects on production are not great in organized plants. Furthermore, training programs are found to be somewhat more extensively used by the union than by the nonunion establishments studied. Partial correlation analysis, however, shows use of training programs to be related to greater use of personnel specialization rather than to the extent of unionization.

Although pension plans and credit unions are characteristic of a much higher proportion of the union than of the nonunion plants surveyed, company structure, rather than unionization, is correlated with interindustry variation in their use. Unionization and plant size are correlated with greater use of credit unions. Separation allowances or supplementary unemployment benefit programs are somewhat more widely used by union than by nonunion plants. Production workers are included in pension programs much more extensively by the union plants than by the nonunion plants surveyed; however, relatively more of the nonunion plants than of the union plants studied provide some housing for their production workers. A much greater proportion of nonunion than union plants require workers to contribute to the cost of company group insurance programs.

Finally, partial correlation analysis applied to 13 industries finds a significant positive correlation between the extent of unionization and the extent of use of four personnel practices: Employment of full-time personnel workers, distribution of plant newspapers or newsheets, reliance on seniority in promotion, and provision of credit unions.

<sup>3</sup> The number included only the "usual number of employees at this location."

<sup>4</sup> Three other possible cross-classifications are not presented because each cell would not contain at least five union or nonunion plants. The 13 comparisons given cover 943 plants, 95 percent of the total.

<sup>5</sup> Only industries with 20 or more plants responding and with a minimum of four union or four nonunion plants were included.

<sup>6</sup> That is, differences of this magnitude would occur by chance fewer than five times if 100 different pairs of samples of constant sizes were drawn from the same population.

Significant negative correlations appear for the use of piecework or incentive systems and the requirement of worker contributions to the cost of group insurance programs.

### Organization of the Findings

The findings of the 1962 survey are set forth in six tables. The first presents a cross-classification analysis showing how plants classified on the basis of "personnel specialization" (defined as the use of full-time personnel workers and/or an organized personnel department), size (plants with less than 250 employees are considered "small;" those with 250 or more employees are termed "large"),<sup>3</sup> location inside or outside standard metropolitan statistical areas (SMSA's), company structure (multiunit or single unit), or unionization compare on the basis of each of the other four classifying criteria.

The remaining five tables give four types of information about the usage of each of 25 selected personnel practices. First, in every table are shown the percentages of all union and all nonunion plants included in the study which use each practice. Since part of the difference revealed in each of these comparisons is attributable to differences among the plants in personnel specialization, size, location, and company structure—not just to differences in unionization—the data were again cross-classified to produce the 13 "all-industries" comparisons of union and nonunion plants given in the second section of each table.<sup>4</sup> The groups of plants contrasted in these sections are thus much more comparable than are the groups of all union and all nonunion plants and the actual differences associated with unionization are clearer.

### Analysis by Industry

Differences among industries also affect personnel practices. So a third series of "industry" comparisons is set out showing the prevalence of the same 25 practices in 10 different industries.<sup>5</sup> The 24 comparisons given for each practice have been tested by Chi square to determine whether or not the differences found are statistically significant. Differences between italicized pairs of figures are significant at the 95-percent confidence level.<sup>6</sup>

*Partial Correlation Analysis.* At the bottom of each table, the results of a partial correlation analysis are given. For this analysis, variation in each of the five classifying characteristics used in the study was correlated with variation in the use of each of the 25 practices in 13 industries,<sup>7</sup> with the influence of the remaining factors being held constant. Where the resulting partial correlations were significant at the 90- or 95-percent confidence level, the factor involved, the partial correlation coefficient, and the confidence level are given. The 13 industries represented in this analysis include only 508 plants, or 53 percent of the total. Therefore, some divergence between the results of partial correlation analysis and the all-industries comparisons is to be expected.

### Limitations

In addition to problems of interpretation and causation associated with this type of analysis, several limitations of the analysis require comment. The total group of respondents differs in some important respects from the total group of nonrespondents: (1) 77 percent of the nonrespondents employ fewer than 250 workers, but only 69 percent of the respondents are this small, a significant difference. To reduce the influence of this difference, the all-industries comparisons, as has been noted, match only plants which have been classified by size. (2) Of the durable goods manufacturers surveyed, 47 percent responded; of the nondurable goods manufacturers, only 39

percent responded, another significant difference. The 10 industry comparisons given in tables 2 through 6 provide a check on the influence which such differences in industry response may have had on the survey findings. For three practices, as noted later, the overall results of the separate industry comparisons differ from those arising from the all-industries comparisons. (3) Of the nonrespondents, 39 percent were located within standard metropolitan statistical areas (SMSA's), whereas of the respondents, 41 percent were so located. This difference, however, is not statistically significant.

### Characteristics of the Plants

Union and nonunion plants included in the survey differ in several important characteristics, as can be seen in table 1. It is noteworthy that a higher percentage of the union plants than of the nonunion have personnel specialization, are located within SMSA's and belong to multiunit firms. The union plants are also larger than their nonunion counterparts. These and the other differences between classified groups of plants shown are especially helpful in evaluating the industry comparisons given in the accompanying tables because the union and nonunion plants in these comparisons, in contrast to those in the all-indus-

<sup>7</sup> In addition to the 10 industries presented in each table, sawmills and planing mills, millwork establishments, and knitting mills were included in the partial correlation analysis. These three industries were excluded from the industry comparisons because each sample contained fewer than four unionized plants.

TABLE 1. CHARACTERISTICS OF 992 SOUTHEASTERN MANUFACTURING PLANTS IN SCOPE OF SURVEY

Characteristics	Number of plants <sup>1</sup>	Median number of employees	Percentage unionized	Percentage with personnel specialization	Percentage located within standard metropolitan areas	Percentage belonging to multiunit firms
All plants.....	992	161	31	51	41	60
Unionization:						
Union.....	309	193		60	59	73
Nonunion.....	672	151		47	33	54
Personnel specialization:						
Present.....	502	297	37		39	74
Absent.....	486	101	25		43	45
Size:						
Large (250 employees or more).....	344	502	40	81	35	80
Small (fewer than 250 employees).....	648	105	27	35	44	49
Location:						
Within SMSA.....	407	139	45	48		58
Outside SMSA.....	585	179	22	53		61
Company structure:						
Multiunit.....	591	224	39	63	40	
Single unit.....	399	117	21	33	43	

<sup>1</sup> Numbers do not add to 992 because some respondents did not answer the question involved.

NOTE: The difference between italicized pairs of figures is significant at the 95-percent confidence level, using the Chi-square test; that is, differences of this magnitude would occur by chance less than 5 times in 100.

TABLE 2. PERCENT OF PLANTS USING SELECTED EMPLOYMENT PRACTICES, 1962

Classification	Number of plants		Application blanks for production workers		Employment references for production workers		Preemployment physical examinations for production workers		Jobs for persons with major physical handicaps	
	Union	Non-union	Union	Non-union	Union	Non-union	Union	Non-union	Union	Non-union
All plants.....	309	672	90	84	88	85	75	46	60	53
All-industries comparisons:										
Plants with personnel specialization:										
Large (250 employees or more):										
Inside SMSA:										
Multiunit.....	50	29	100	97	94	93	92	86	78	79
Single unit.....	15	10	93	100	80	100	87	70	80	60
Outside SMSA:										
Multiunit.....	48	103	98	100	94	97	88	72	77	71
Single unit.....	5	16	100	100	100	100	100	44	60	50
Small (fewer than 250 employees):										
Inside SMSA:										
Multiunit.....	27	28	96	100	93	100	85	82	65	44
Single unit.....	13	22	84	100	85	91	54	41	23	45
Outside SMSA:										
Multiunit.....	21	59	90	97	95	95	76	57	70	58
Single unit.....	6	43	100	84	83	74	50	44	60	45
Plants without personnel specialization:										
Large (250 employees or more):										
Outside SMSA:										
Multiunit.....	10	25	100	92	80	84	70	44	50	58
Small (fewer than 250 employees):										
Inside SMSA:										
Multiunit.....	42	48	90	94	88	94	76	40	41	43
Single unit.....	26	74	65	80	77	84	46	19	50	51
Outside SMSA:										
Multiunit.....	21	63	85	69	86	75	71	54	29	46
Single unit.....	14	125	64	54	86	70	26	22	54	40
Industry comparisons: <sup>1</sup>										
Paper pulp.....	21	6	100	100	95	100	95	67	62	50
Fertilizer.....	14	6	46	50	50	83	43	67	43	67
Fabricated structural metal products.....	19	18	95	94	89	94	79	50	58	59
Small fabricated metal products.....	13	13	100	92	100	100	92	54	42	23
Dairy products.....	12	15	100	100	100	93	92	73	50	36
Meat products.....	12	16	100	81	100	81	92	56	33	44
Bakery products.....	8	12	100	100	100	92	75	67	43	83
Apparel.....	17	80	88	99	71	94	29	32	63	49
Spinning and weaving.....	15	96	100	95	100	91	80	59	67	68
Furniture.....	4	38	100	78	100	95	50	53	50	58
Variables with significant partial correlation coefficients.....			Personnel specialization .500 <sup>2</sup>		Personnel specialization .512 <sup>2</sup>		SMSA location .834 <sup>3</sup> Plant size .725 <sup>3</sup>		None	

<sup>1</sup> Industries are listed in descending order by percentage of unionization.<sup>2</sup> Partial correlation coefficient significant at the 90-percent confidence level.<sup>3</sup> Partial correlation coefficient significant at the 95-percent confidence level.

NOTE: The difference between all italicized pairs of figures is significant at the 95-percent confidence level using the Chi-square test; that is, differences of this magnitude would occur by chance less than 5 times in 100.

tries comparisons, have not been standardized with respect to the four other criteria.

In the following presentation, the 25 practices investigated have been grouped into the five categories of employment, safety, communications, labor productivity, and employee benefits.

### Variation in Hiring Practices

In interviews and questionnaire responses, the companies indicated the role they assign to the various employment practices. The personnel manager of a large nonunion spinning and weaving mill stated, "We don't hire anyone who hasn't grown up right around here without checking his last employer and finding out about him as a worker, his character, and his 'isms.'" Organized

employers have a somewhat different concern. An official of a large paper pulp mill observed, "Our company is very careful in hiring. We don't want to get undesirables. It is sufficiently difficult to get rid of problem children now—and this is to the credit of the union—that you want to make sure that you don't get them in the first place." In contrast, managers of unorganized plants in small isolated communities may not be greatly concerned about unions when hiring men. As one small town lumberman commented, "We have little trouble in selecting new employees; this is a nonunion town."

Comparisons of all union and all nonunion plants in table 2 suggest that the unionized plants studied make much wider use of three of the four practices presented than do the nonunion plants.



A more detailed examination, however, does not support this view.

The 23 all-industries and industry comparisons show higher percentages by union and nonunion plants in almost identical numbers for the use of both application blanks and references in hiring production workers.<sup>8</sup> Interestingly, a significantly higher proportion of the unorganized than of the organized apparel plants use both practices. As can be seen at the bottom of table 2, partial correlation analysis indicates that, of the five factors under examination, only personnel specialization is significantly correlated with industry variation in the use of these two practices.

*Physical Examinations.* Unionization appears to be associated with wider use of preemployment physical examinations. Personnel men who were contacted in the survey indicated these examinations vary greatly from plant to plant in the survey sample. Some are given only to men and are limited to checking eyes and chest and to administering blood tests. Others are more rigorous and are required not only of new workers, but of any employee who has been off the job for 30 days or more. In the great majority of the detailed comparisons in table 2 (20 of 23), a larger proportion of union than of nonunion plants report use of physical examinations for production workers. In seven comparisons, the difference is significant. The partial correlation analysis suggests that the tendency of an industry's plants to be large and located within an SMSA will be accompanied by a tendency toward use of physical examinations. Since union plants tend to be larger than nonunion plants and since a higher proportion of plants inside than outside SMSA's are unionized, these correlations are consistent with the union influence suggested by the comparisons. As one employer pointed out, in the larger plants located in big cities, "The number of applicants is heavier; therefore, a more deliberate screening process must be used, part of which is the preemployment physical examination." Workers in organized plants might be expected to press claims for all injuries with more vigor than workers in unorganized plants; hence, the greater tendency for union plants than for nonunion plants to require physical examinations is logical. Of the plants requiring physical examinations, 41 percent reported that they had a nurse or doctor

in the plant on at least a part-time basis. Only 5 percent of the plants not demanding physical examinations had nurses or doctors available.

*Employment of Physically Handicapped.* Responding plants were asked whether they had in their employ any "persons with major loss of sight or hearing, missing limbs or portions thereof, or other major physical defect." Significantly, more of all union than of all nonunion plants answered "yes," but further analysis does not reveal any significant differences between comparable groups of plants. Union plants report the higher percentages in 11 comparisons and the nonunion, in 12. Furthermore, none of the factors is significantly correlated with interindustry variations in use of handicapped persons. In their comments, responding managers brought out that the number of handicapped persons employed in any given plant is usually small, and frequently this number includes only persons injured while working in that establishment.

### Where Safety Programs Are Found

Employee safety is a natural area of union concern. Furthermore, most managers view safety as a field of joint interest with unions. The data of table 3 indicate generally some association of unionization with greater use of the three safety practices covered.

Organized plants report higher percentages having safety programs in only slightly more cases (10 to 9, with 4 ties) than do unorganized plants. In one all-industries comparison, however, the difference between the (higher) figure for the union plants and the figure for nonunion plants is statistically significant. SMSA location and size, but not unionization, are significantly correlated with variation among industries in the use of safety programs.

<sup>8</sup> The use of references and employment of handicapped persons, shown in table 2, provide two of the three instances in which the overall results of the all-industries and the industry comparisons are in conflict. For references, the all-industries comparisons show union plants high in four cases, and nonunion in seven, with two ties. In contrast, the industry comparisons show union plants high in five cases and the nonunion in only four (though one of these is significant), with one tie. For use of handicapped persons, the all-industries comparisons show the union high in seven cases and the nonunion in six, whereas the industry comparisons show the union high in only four and the nonunion in six, with no significant differences in either group.

TABLE 3. PERCENT OF PLANTS USING SELECTED SAFETY PRACTICES, 1962

Classification	Number of plants		Safety program		First aid treatment on premises		Nurse or doctor in plant on full- or part-time basis	
	Union	Nonunion	Union	Nonunion	Union	Nonunion	Union	Nonunion
All plants.....	309	672	91	84	94	93	88	19
All-industries comparisons:								
Plants with personnel specialization:								
Large (250 employees or more):								
Inside SMSA:								
Multunit.....	50	29	100	100	98	100	84	72
Single unit.....	15	10	87	90	93	90	53	60
Outside SMSA:								
Multunit.....	48	103	98	96	100	98	79	55
Single unit.....	5	16	100	88	100	100	25	25
Small (fewer than 250 employees):								
Inside SMSA:								
Multunit.....	27	28	96	100	96	86	23	21
Single unit.....	13	22	85	91	92	91	15	5
Outside SMSA:								
Multunit.....	21	59	95	95	100	97	24	24
Single unit.....	6	43	67	81	100	98	0	7
Plants without personnel specialization:								
Large (250 employees or more):								
Outside SMSA:								
Multunit.....	10	25	80	75	100	92	40	28
Small (fewer than 250 employees):								
Inside SMSA:								
Multunit.....	42	48	93	83	86	96	14	4
Single unit.....	26	74	73	81	77	85	8	3
Outside SMSA:								
Multunit.....	21	63	100	78	95	84	5	0
Single unit.....	14	125	71	73	93	92	7	3
Industry comparisons: <sup>1</sup>								
Paper pulp.....	21	6	100	100	100	100	67	17
Fertilizer.....	14	6	93	100	93	100	8	17
Fabricated structural metal products.....	19	18	89	94	95	88	21	18
Small fabricated metal products.....	13	13	92	92	100	100	64	15
Dairy products.....	12	15	92	87	92	93	0	0
Meat products.....	12	16	92	81	92	94	60	13
Bakery products.....	8	12	100	92	88	92	13	0
Apparel.....	17	80	65	71	94	98	24	21
Spinning and weaving.....	15	96	100	95	100	95	50	45
Furniture.....	4	38	100	79	100	97	50	16
Variables with significant partial correlation coefficients.			SMSA location .735 <sup>2</sup> Plant size .649 <sup>2</sup>		Personnel specialization .649 <sup>2</sup>		Personnel specialization .571 <sup>2</sup>	

<sup>1</sup> See footnote 1, table 2.<sup>2</sup> See footnote 3, table 2.<sup>3</sup> See footnote 2, table 2.

NOTE: Differences between italicized pairs of numbers significant at 95-percent confidence level.

First aid treatment for employees is now administered in almost all plants, union and nonunion, in the Southeast. Although in no instance is the difference significant, union plants do have higher percentages in somewhat more comparisons (12 to 8) than do the nonunion plants.<sup>9</sup> Personnel specialization is the only factor significantly correlated with interindustry variation in provision of first aid treatment—not a surprising result. The practice of providing a nurse or doctor in the plant on at least a part-time basis stands in marked contrast. Only a minority of the

<sup>9</sup> This is the third instance of divergent tendencies for the two groups of data. As has been noted, the industry comparisons involve only 53 percent of the entire group of plants covered in the all-industries comparisons, so some divergence in results should be anticipated if practices vary between the plants included in the industry comparisons and the plants not included in these comparisons. The all-industries comparisons show the union high in nine cases, and the nonunion high in three, with one tie. The industry comparisons show the union plants high in three cases, but the nonunion high in five cases, with two ties.

southern plants surveyed have this protection for their employees. In most comparisons (16 of 23, including 9 of the 13 all-industries comparisons), a higher percentage of union than of nonunion plants have a nurse or doctor. In four instances, the difference is significant. Three of these instances, however, are industry comparisons in which differences stemming from personnel specialization have not been eliminated. This fact is important because personnel specialization is the only factor which table 3 shows to be significantly correlated with interindustry variation relative to this practice in the 13 industries examined.

### The Union and Information

In these southern plants, unionization is closely associated with the five communications practices

included in table 4. In each comparison a significantly larger proportion of all union than of all nonunion plants report these practices. Similar differences are found in many of the detailed comparisons. The possibility that both management and workers in organized plants might have more active communication channels than their counterparts in unorganized plants is not difficult to rationalize, in terms of the competition for worker loyalty and the functions of the union.

The data in table 4 suggest that the presence of a union accompanies the use of both full-time personnel workers and an organized personnel department. The union plants have higher percentages in a great majority of the comparisons

(25 of 36)<sup>10</sup> for the two practices. In three instances, the difference is significant. As table 4 shows, both plant size and unionization are correlated significantly with interindustry variation in use of full-time personnel workers. Variation in plant size alone, however, is correlated with interindustry differences in use of personnel departments.<sup>11</sup> It is not surprising that managers dealing with unions may turn to full-time, specialized help. Especially would this be true if man-

<sup>10</sup> As table 4 explains, only 18 comparisons are given for each practice.

<sup>11</sup> Because "personnel specialization" is defined in terms of the use of full-time personnel workers and organized personnel departments, this variable was dropped in the partial correlation analysis of these two practices.

TABLE 4. PERCENT OF PLANTS USING SELECTED COMMUNICATIONS PRACTICES, 1962

Classification	Number of plants		Full-time personnel worker		Organized personnel department		Plant newspaper or newsheet		Formalized grievance procedure		Post job vacancies for bidding	
	Union	Non-union	Union	Non-union	Union	Non-union	Union	Non-union	Union	Non-union	Union	Non-union
All plants.....	309	672	58	41	50	35	50	18	97	54	53	7
All-industries comparisons:												
Plants with personnel specialization:												
Large (250 employees or more):												
Inside SMSA:												
Multiunit.....	50	29	100	100	94	90	52	52	98	69	64	14
Single unit.....	15	10	100	100	93	80	47	40	100	60	40	20
Outside SMSA:												
Multiunit.....	48	103	98	95	94	93	56	40	100	84	59	11
Single unit.....	5	16	100	94	100	81	0	12	100	88	80	6
Small (fewer than 250 employees):												
Inside SMSA:												
Multiunit.....	27	28	85	86	74	70	30	41	100	63	70	11
Single unit.....	13	22	100	86	62	71	0	9	92	52	23	9
Outside SMSA:												
Multiunit.....	21	59	90	83	57	59	24	22	100	72	57	14
Single unit.....	6	43	100	77	33	60	0	14	100	60	40	0
Plants without personnel specialization: <sup>1</sup>												
Large (250 employees or more):												
Outside SMSA:												
Multiunit.....	10	25					10	8	100	44	60	4
Small (fewer than 250 employees):												
Inside SMSA:												
Multiunit.....	42	48					26	21	93	46	59	12
Single unit.....	26	74					0	1	92	42	20	4
Outside SMSA:												
Multiunit.....	21	63					29	10	95	48	55	10
Single unit.....	14	125					0	4	93	30	36	2
Industry comparisons: <sup>2</sup>												
Paper pulp.....	21	6	90	50	88	33	52	33	100	80	61	20
Fertilizer.....	14	6	57	33	36	20	36	17	100	33	50	0
Fabricated structural metal products.....	19	18	53	28	60	11	32	12	95	39	28	6
Small fabricated metal products.....	13	13	69	54	62	54	31	8	100	69	62	31
Dairy products.....	12	15	36	20	17	7	17	20	100	47	100	7
Meat products.....	12	16	42	25	25	25	33	25	100	56	33	6
Bakery products.....	8	12	38	42	25	25	13	8	88	42	100	17
Apparel.....	17	80	29	38	24	38	12	25	84	66	19	6
Spinning and weaving.....	15	96	87	75	80	69	20	26	100	79	93	6
Furniture.....	4	38	50	26	50	30	0	11	100	55	25	5
Variables with significant partial correlation coefficients.....			Plant size .844 <sup>3</sup> Unionization .641 <sup>3</sup>		Plant size .828 <sup>3</sup>		Unionization .829 <sup>3</sup> Plant size .704 <sup>3</sup>		Personnel specialization .681 <sup>3</sup> Company structure .642 <sup>3</sup>		Company structure .771 <sup>3</sup> SMSA location .688 <sup>3</sup>	

<sup>1</sup> Since the presence of a full-time personnel worker or an organized personnel department was used to define "personnel specialization," none of the plants without personnel specialization have these two practices and no figures are given.

<sup>2</sup> See footnote 1, table 2.

<sup>3</sup> See footnote 3, table 2.

NOTE: Differences between italicized pairs of numbers significant at 95-percent confidence level.



agers' views coincide with the following comment made by one textile man: "With a union you have more problems, a million complications. Unions thrive on complicating your affairs. If they didn't there wouldn't be a union."

A higher proportion of the organized than of the unorganized plants studied regularly distribute a company newspaper or newssheet to their employees. In a slight majority of the comparisons (12 of 23, with 1 tie) the union plants have the higher figures, though in only one case is the difference significant. Unionization and plant size emerge from partial correlation analysis as significantly correlated with interindustry variation in use of this practice. The greater need for formal communications, plus the advantage of spreading fixed printing costs over a large number of copies, may help explain why greater use of newspapers and newssheets is associated with a higher percentage of unionization and greater size in the different industries studied.

In the provision of formal grievance procedures for employees and in posting job vacancies for employee bidding, the unions would be expected to have a great influence. Indeed, in each of the many comparisons presented, a higher proportion of union than of nonunion plants have these two practices, and in most comparisons (35 of 46) the difference is significant.

### Grievances in the Nonunion Firm

Of special interest is the wide use of grievance procedures by nonunion plants. Some of these plants, it is true, have retained the practice from organized days. As the manager of a unionized spinning and weaving mill declared, "I've found from 32 years of experience that without such procedures management would not hear about certain grievances until they reached a dangerous stage." He would keep the grievances procedure, but without the arbitration step, even if his plant went nonunion. Similarly, the personnel manager of a large metalworking plant stated, "Under the union relationship, if a man has a grievance, it comes up; it doesn't lie festering." Personnel men in some unorganized plants seek to avoid

unionization by establishing practices which reduce or resolve worker grievances. On the other hand, some nonunion employers taking part in the study felt that their workers voice their grievances, even without a grievance procedure. Typical comments were "We have a complete and workable 'open door' policy;" "We have no established steps, but they can air grievances;" and "But they do air them."

Despite the strong association of unionization with use of grievance systems as shown by the comparisons, partial correlation analysis found that in the industries studied, the higher the proportion of plants having personnel specialization, and the higher the proportion belonging to multiunit companies, the higher is the proportion of plants which have formal grievance procedures.

But, multiunit plants in the South are more likely to be unionized than are single unit plants.<sup>12</sup> Thus, unions may be exercising a real, though indirect, influence on the use of grievance systems in nonunion plants. Such influence eludes the power of the correlation technique. Partial correlation analysis also brings out that the higher the proportion of multiunit plants and the higher the percentage of plants located within an SMSA, the higher is the proportion of plants in the industries studied which post job vacancies for bidding.

Most managers discussing the posting of job vacancies for employee bidding expressed little enthusiasm for the practice. One did concede that it revealed which jobs were underpriced. Most argued that it worked best if only a narrow group of employees were allowed to bid. Many companies which do not formally post jobs for bidding do encourage their employees to file requests for transfers which are considered when vacancies occur. Some unions, such as the United Mine Workers, are apparently not interested in promoting job bidding.

### Piece Rates and Other Incentives

Of the practices examined in this study, six may have a special impact on labor productivity. The findings relative to the use of these practices are presented in table 5. Except for training programs, unionization does not appear to be associated with greater use of those practices generally thought to favor greater productivity.

<sup>12</sup> See H. E. Steele and S. C. McIntyre, "Company Structure and Unionization," *The Journal of the Alabama Academy of Science*, January 1959, pp. 27-44.



*Piece Rates.* Managers of many southern plants are convinced that a good piecework or incentive program leads to greater output per man-hour. The survey results suggest that in unorganized plants, where they are freer to act, managers attempt to carry this conviction into practice. Incentive or piecework plans for production workers are more widespread in nonunion than in union plants. In a substantial majority of the comparisons (15 of 23), the unorganized plants report higher percentages than do the organized plants. In three of these cases, the differences are significant. On the other hand, significantly more of the organized than of the unorganized plants in the small fabricated metal products industry and in the meat products industry use piecework or incentive plans. When interviewed concerning use of incentive programs, managers frequently said that they did not use such plans because their "union will not allow." Unions still consider such programs as "stretch-out devices," these men stated. In the industries examined, both unionization and personnel specialization are significantly correlated with the prevalence of piecework and incentives, but the correlation is negative for unionization.

There is some indication that incentive programs are not as widely used in the South as they once were.<sup>13</sup> Advancing technology may be a major reason—for neither does unionization seem to be growing within the region.<sup>14</sup> Coal company officials, for example, stated that mechanization has made piecework nearly impossible in that industry because individual output can no longer be identified. A synthetic fiber plant representative pointed out that machine-pacing of output in his industry reduced the usefulness of such plans. Other interviewees stressed the difficulty of keeping incentive systems up to date, taking into account technological improvements which cut production time.

*Profit Sharing.* The relationship between increased employee effort and increased profit is not nearly so direct as the relationship between effort and output. This fact may explain why profit-sharing plans are less widely used in both union and nonunion plants than are piecework or incentive plans. The data of table 5 support the view that the influence of unions is against profit-

sharing programs, at least in the plants under scrutiny. A great majority of the comparisons (18 of 23) show the nonunion plants with higher percentages than the union plants. And in five instances, the differences are significant. None of the factors under investigation, however, appears to be significantly correlated with interindustry variation in use of profit sharing.

Other employers may believe, as does a southern foundry manager who was interviewed, that, "With our union profit sharing wouldn't work out. The class of men who work in foundries couldn't see far enough ahead to see employers and employees in partnership. They are union men and future rewards don't appeal to them. They want it today." Another manager of an organized plant stated that union wage pressure was so great that little profit was left to be shared, even if the company had a plan. A number of interviewees stated that profit-sharing plans are frequently inaugurated in unorganized plants "to keep the union out."

According to some managers, the presence or absence of a union in the plant is a major factor in determining whether or not production workers will be included in the plant's profit-sharing program. They say that they do not want to include organized workers in such a program for fear that the union will demand a voice in its operation. Thus, as expected, in the great majority of the comparisons given in table 5 (17 of 22),<sup>15</sup> a higher proportion of the nonunion than of the union plants include production workers. In two comparisons, the difference is significant. As interviews also brought out, in at least some of the profit-sharing plans which reportedly include production workers, only selected "key" employees are actually covered. Contrary to the results seen in the comparisons and found in the interviews, partial correlation analysis shows that both company structure and SMSA location, but not unionization, are significantly correlated with differences among industries in the inclusion of production workers in profit-sharing plans.

<sup>13</sup> Of the plants studied in the 1952 study, cited in footnote 2, 59 percent reported a piecework or incentive plan; of the 1962 plants, only 45 percent reported such plans.

<sup>14</sup> In 1952, 43 percent, but in 1962, only 31 percent of the plants studied were unionized.

<sup>15</sup> One potential all-industries comparison was lost because no union plants fell into that category.

TABLE 5. PERCENT OF PLANTS USING SELECTED PRODUCTIVITY PRACTICES, 1962

Classification	Number of plants		Some production workers paid by piece rate or incentive		Profit-sharing program		Profit-sharing program including production workers (plants with program only)		Job evaluation program for production workers		Training program		Seniority an important factor in promotion	
	Union	Non-union	Union	Non-union	Union	Non-union	Union	Non-union	Union	Non-union	Union	Non-union	Union	Non-union
All plants.....	309	672	32	51	18	26	43	65	51	48	71	59	85	60
All-industries comparisons:														
Plants with personnel specialization:														
Large (250 employees or more):														
Inside SMSA:														
Multiunit.....	50	29	45	62	20	42	50	75	65	82	76	83	90	75
Single unit.....	15	10	47	60	13	33	50	67	33	70	80	80	73	60
Outside SMSA:														
Multiunit.....	48	103	31	76	17	41	12	39	66	74	92	87	90	69
Single unit.....	5	16	80	88	0	25	(1)	-----	60	69	60	75	100	69
Small (fewer than 250 employees):														
Inside SMSA:														
Multiunit.....	27	28	27	41	22	48	67	85	81	67	70	89	85	73
Single unit.....	13	22	54	32	8	41	100	89	42	45	69	59	58	67
Outside SMSA:														
Multiunit.....	21	59	24	56	20	19	0	54	70	62	60	68	90	72
Single unit.....	6	43	67	54	33	22	0	78	60	60	67	79	100	58
Plants without personnel specialization:														
Large (250 employees or more):														
Outside SMSA:														
Multiunit.....	10	25	70	60	10	24	0	50	56	54	78	64	80	63
Small (fewer than 250 employees):														
Inside SMSA:														
Multiunit.....	42	48	14	30	19	38	50	67	45	28	64	56	86	53
Single unit.....	26	74	27	29	8	21	50	93	12	28	46	40	77	52
Outside SMSA:														
Multiunit.....	21	63	25	36	22	16	50	70	43	43	71	44	79	53
Single unit.....	14	125	7	44	7	14	100	88	15	25	62	31	79	51
Industry comparisons: <sup>2</sup>														
Paper pulp.....	21	6	14	50	10	17	0	0	43	50	90	100	100	60
Fertilizer.....	14	6	0	0	8	17	100	0	29	17	43	50	71	50
Fabricated structural metal products.....	19	18	11	29	16	18	67	67	33	29	63	59	96	56
Small fabricated metal products.....	13	13	62	23	8	31	0	75	69	67	85	77	77	77
Dairy products.....	12	15	0	7	17	29	50	75	50	31	76	20	75	73
Meat products.....	12	16	63	19	17	33	0	60	58	27	75	50	92	67
Bakery products.....	8	12	0	27	13	33	0	100	50	67	75	64	88	56
Apparel.....	17	80	94	98	18	15	0	42	44	57	65	78	65	55
Spinning and weaving.....	15	96	93	91	13	32	0	40	53	71	60	75	100	69
Furniture.....	4	38	50	50	50	41	0	73	0	42	50	38	25	54
Variables with significant partial correlation coefficients.....			Unionization <sup>3</sup> .810 <sup>4</sup> Personnel specialization .739 <sup>4</sup>		None		Company structure <sup>3</sup> .687 <sup>4</sup> SMSA location .498 <sup>3</sup>		Personnel specialization .697 <sup>4</sup>		Personnel specialization .794 <sup>4</sup>		Unionization .748 <sup>4</sup> Plant size .667 <sup>4</sup>	

<sup>1</sup> No union plants in this category.<sup>2</sup> See footnote 1, table 2.<sup>3</sup> Negative correlation.<sup>4</sup> See footnote 3, table 2.<sup>5</sup> See footnote 2, table 2.

NOTE: Differences between italicized pairs of numbers significant at 95-percent confidence level.

Partial correlation analysis shows that both concentration in single-unit firms and concentration inside SMSA's—but not extent of unionization—are significantly correlated with differences among industries as to the inclusion of production workers in profit-sharing programs. Since unionization is less pervasive among single- than among multi-unit plants, the first correlation is consistent with the hypothesis that organized plants hesitate to include production workers in their profit-sharing plans. Since unionization is more pervasive among plants located inside than among plants

located outside SMSA's, the correlation as to location is inconsistent with the results of the comparisons of union and nonunion plants. The partial correlation technique, however, attempts to hold the influence of other factors constant as it weighs the influence of one. Thus the percentage of plants of various industries that are located within SMSA's may well be correlated with the percentage of plants in those industries which include production workers in profit-sharing programs, when the influence of unionization and other factors is held constant.

*Job Evaluation.* A favorite tool of professional personnel men, a successful job evaluation installation should contribute to employee morale and thus to greater productivity. Data in table 5 show that the proportion of plants in the industries examined which have job evaluation for production workers tends to vary with the proportion having personnel specialization. A slight majority of the comparisons (12 of 23) show job evaluation as more widespread in nonunion than in union plants, but in no instance is the difference significant. Some organized plants, according to personnel men, yield to union pressure and limit their job evaluation programs to salaried workers. In the meat industry, however, it is the unions which have pressed the companies to adopt job evaluation.<sup>16</sup>

*Training Programs.* A greater proportion of the organized than of the unorganized plants report training programs for production workers or supervisors. Union insistence upon seniority and promotion from within may contribute to this difference, which is to be found in a majority (13 of 23) of the comparisons. Furthermore, in three of these instances the difference is significant. Of the five factors under study, however, personnel specialization is the only one which correlated significantly with differences among the 13 industries examined in use of training programs.

*Seniority.* The anticipated association of unionization and the use of seniority in promotion is fully borne out by the data in table 5. In nearly all of the comparisons (20 of 23), 9 of which produce significant differences, a higher percentage of union than of nonunion plants report that seniority is a major promotion factor. Furthermore, as is shown in the table, unionization and plant size are significantly correlated with inter-industry variation in use of seniority.

The wide use of seniority in nonunion plants deserves comment. To be sure, managers pointed out that in these plants seniority is used less rigidly and for more restricted purposes than in union plants. Also, many personnel men in organized plants reported that they carry on a continual struggle to win proper consideration of worker qualifications for promotion and to keep the way open for promising young men to rise in the company. But even in nonunion plants, the

principle of seniority receives support because it "reduces headaches" and "helps to avoid charges of favoritism." Taken as a whole, interviews with managers of southern plants yield the impression that seniority, as it is used, is not considered a major deterrent to production, even in organized plants.

### Determinants of Fringe Benefits

Nearly all discussions of industrial relations assume that union organization leads to a broader program of "fringe benefits." The data in table 6 support this assumption as applied to the southern plants studied. A greater percentage of all union than of all nonunion plants report each of the benefits covered, except company housing. Consistent with this pattern, management in a smaller proportion of union than of nonunion plants asks workers to assist in meeting the cost of group insurance programs.

*Pensions.* Unions appear to be associated with wider use of pension programs, but this picture is not clear. In most of the comparisons presented (17 of 23), a higher percentage of union plants than of nonunion plants report a pension plan, and in 6 instances these differences are statistically significant. In one comparison,<sup>17</sup> however, a significantly higher proportion of nonunion than of union plants have pension plans. Further, of the five elements under study, only company structure, not unionization, emerges from partial correlation analysis as significantly correlated with variation in use of pension plans by the 13 industries examined.

Relatively more union than nonunion plants include production workers in their pension programs. In most comparisons (16 of 22),<sup>18</sup> union plants have higher percentages than the nonunion, and in two instances, the differences are significant. Nevertheless, as table 6 shows, even some organized plants do not include production workers in their pension plans. In view of the attitude toward employee efforts to achieve security that was frequently expressed by managers during

<sup>16</sup> The difference between union and nonunion meat plants in the use of job evaluation is significant at the 90-percent confidence level.

<sup>17</sup> This comparison, as is shown in table 6, involves plants which are without personnel specialization, small located inside SMSA's, and single-unit.

<sup>18</sup> One potential all-industries comparison could not be made because none of the plants in that category were unionized.



TABLE 6. PERCENT OF PLANTS WITH SELECTED FRINGE BENEFIT PROGRAMS, 1962

Classification	Number of plants		A pension plan other than OASI		Pension plan including production workers (plants with plan, only)		A separation allowance or SUB for laid-off workers		Company housing		Credit union		Group insurance program		Workers pay part of group insurance cost (plants with program, only)	
	Union	Non-union	Union	Non-union	Union	Non-union	Union	Non-union	Union	Non-union	Union	Non-union	Union	Non-union	Union	Non-union
All plants.....	309	672	64	40	88	67	21	8	7	10	33	15	94	91	60	76
All-industries comparisons:																
Plants with personnel specialization:																
Large (250 employees or more):																
Inside SMSA:																
Multiunit.....	50	29	86	79	95	91	38	21	4	7	71	31	100	100	56	76
Single unit.....	15	10	60	56	89	80	7	10	7	10	73	40	100	100	60	80
Outside SMSA:																
Multiunit.....	48	103	90	74	90	47	35	8	17	9	54	22	100	98	42	75
Single unit.....	5	16	20	50	100	75	0	6	20	25	20	7	100	94	60	73
Small (fewer than 250 employees):																
Inside SMSA:																
Multiunit.....	27	28	77	67	95	76	33	12	4	7	37	35	100	100	48	64
Single unit.....	13	22	15	41	50	78	8	0	0	0	8	19	85	95	82	95
Outside SMSA:																
Multiunit.....	21	59	67	41	86	71	14	18	10	19	38	9	100	90	76	70
Single unit.....	6	43	0	15	(1)	-----	0	5	17	7	0	12	67	93	100	78
Plants without personnel specialization:																
Large (250 employees or more):																
Outside SMSA:																
Multiunit.....	10	25	50	44	60	55	0	4	20	8	0	25	100	96	70	71
Small (fewer than 250 employees):																
Inside SMSA:																
Multiunit.....	42	48	74	43	94	60	22	13	2	0	22	19	98	94	54	82
Single unit.....	26	74	8	30	100	81	4	7	0	5	15	9	77	93	60	71
Outside SMSA:																
Multiunit.....	21	63	60	27	75	88	10	5	5	10	21	16	86	87	89	81
Single unit.....	14	125	36	13	60	71	7	4	21	17	14	5	86	78	75	81
Industry comparisons: <sup>2</sup>																
Paper pulp.....	21	6	90	100	100	80	33	0	10	0	71	50	100	100	48	40
Fertilizer.....	14	6	86	67	92	75	14	33	21	0	23	17	93	67	77	100
Fabricated structural metal products.....	19	18	47	21	100	67	16	7	0	0	16	39	95	100	76	69
Small fabricated metal products.....	13	13	85	53	91	100	31	15	0	0	46	23	92	92	67	75
Dairy products.....	12	15	50	40	83	100	27	33	0	0	55	14	100	100	67	86
Meat products.....	12	16	67	47	100	71	25	7	0	6	33	38	100	88	50	43
Bakery products.....	8	12	88	60	86	67	0	9	0	0	38	33	100	100	38	82
Apparel.....	17	80	41	30	57	35	6	3	0	4	18	12	88	86	60	70
Spinning and weaving.....	15	96	40	55	50	46	0	8	20	29	27	11	100	100	53	85
Furniture.....	4	38	50	28	50	90	0	3	0	5	75	8	75	95	67	72
Variables with significant partial correlation coefficients.....			Company structure .561 <sup>3</sup>		None		None		SMSA location <sup>4</sup> .643 <sup>4</sup>		Unionization <sup>4</sup> .910 <sup>4</sup> Plant size .606 <sup>4</sup>		Plant size .643 <sup>4</sup> SMSA location .603 <sup>4</sup>		Unionization <sup>4</sup> .582 <sup>3</sup>	

<sup>1</sup> No union plants in this category.<sup>2</sup> See footnote 1, table 2.<sup>3</sup> See footnote 2, table 2.<sup>4</sup> See footnote 3, table 2.<sup>5</sup> Negative correlation.

NOTE: Differences between italicized pairs of numbers significant at 95-percent confidence level.

interviews, the number of plants in which top company men are included in both pension and profit-sharing programs, while their production workers are excluded, is paradoxical. Again, some managers stated that they would like to set up a pension plan, but that union negotiations left no margin with which to pay for it. Table 6 shows that none of the factors is significantly correlated with interindustry variation in the practice of including production workers in pension plans.

*Severance Pay.* Granting of separation allowances or supplementary unemployment benefits to

workers who are laid off is not a widespread practice in the South, even among organized plants. The custom is somewhat more common among union than among nonunion establishments, however. In a bare majority of the comparisons (12 of 23), the union plants report higher percentages than do nonunion plants, and in one instance, the difference is significant. None of the five factors being studied is significantly correlated with interindustry variation in granting this benefit.

*Housing.* Company housing is a program being "phased out" by southern plant managers. Earlier studies of personnel practices within the region

revealed that significantly fewer union than non-union plants then had company housing.<sup>19</sup> By 1962, however, the difference had almost disappeared. As table 6 shows, in five comparisons, neither union nor nonunion plants report any housing for production workers. Many southern plants were originally located in small communities and had to build houses to attract and hold workers. Therefore, it is expected that the proportion of plants in an industry located outside SMSA's would be significantly correlated with the proportion having company housing for their workers, as is shown in table 6.

*Credit Unions.* The presence of credit unions is clearly associated with the extent of unionization. In most comparisons (18 of 23), a greater proportion of the organized plants than of the unorganized plants report credit unions, and in five cases, the difference is significant. Underlying the difference in usage may be differences in the attitudes of plant management. Some nonunion employers indicate that they view with disfavor the very term "credit union." Furthermore, credit union officials who were contacted state that they have found that some nonunion employers fear that cooperation among workers developed in establishing a credit union might lead to organization of a labor union as well. Differences in extent of unionization and in plant size are both significantly correlated with variation in the use of credit unions among the industries studied.

*Group Insurance.* The vast majority of the plants under scrutiny have some form of group insurance for their employees. The most frequent are life insurance and hospital and surgical

expense insurance.<sup>20</sup> In 1952, a significantly higher percentage of union than of nonunion plants surveyed in the South had group insurance, but a decade later the difference apparently had practically disappeared.<sup>21</sup> Only two significant differences between union and nonunion plants in the use of group insurance are found in table 6, and it is the nonunion plants which report the higher percentages. Variation in the proportion of plants with group insurance is correlated both with plant size and with the proportion of plants located within an SMSA.

Managers of organized plants assert that they are under continual pressure to improve benefit programs and that these improvements obviously increase their costs substantially. In most companies surveyed, particularly the nonunion ones, workers help bear the cost of group insurance. In the great majority of the comparisons (17 of 23), a larger proportion of the nonunion than of the union plants ask their workers to contribute. In four cases, the differences are significant. Employers state that the workers are more frequently required to help pay the cost of hospitalization insurance than of any other type. Unionization is correlated with variation in the proportion of plants in the industries under examination which require worker contributions to group insurance, but, as expected, this correlation is negative.

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<sup>19</sup> In 1952, company housing was reported by 25 percent of the union and 35 percent of the nonunion plants. In 1958-59, company housing was reported by 18 percent of the union and 29 percent of the nonunion plants. The difference between union and nonunion plants was statistically significant in both of these surveys.

<sup>20</sup> These programs were reported by 92, 97, and 97 percent, respectively, of the 391 southern plants studied in 1958-59.

<sup>21</sup> Steele, Myles, and McIntyre, op. cit., p. 258.

# Some Indicators of Incentive Plan Prevalence

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MANY ISOLATED STATEMENTS are made in the literature of economics, industrial engineering, and industrial relations concerning the circumstances under which one would expect to find a higher incidence of wage incentives, but no attempt has been made to test these premises systematically. This article presents the results of an analysis of certain industrial characteristics that might be considered predictive of the prevalence of wage incentives.

A study published in the *Monthly Labor Review* of May 1960,<sup>1</sup> provides estimates of incentive coverage for production and related workers for 73 industry groups. Data for the other characteristics were obtained from the *1958 Census of Manufactures*, *Congressional Committee Reports*, *Monthly Labor Review*, and *Employment and Earnings*.

## Nature and Degree of Competition

It has been asserted that wage incentives will be used more frequently when labor cost is a highly competitive factor.<sup>2</sup> This assertion is a special case of a more general proposition: a business will attempt to control the big costs; therefore, wage incentives—which impose a ceiling on unit labor costs—will be used more frequently when labor costs represent a higher percentage of the value added by manufacture.

The data array<sup>3</sup> (table 1) indicates a positive relationship between labor cost and incentive cov-

erage. For example, the cigarette industry has a labor cost factor of 12 percent and an incentive coverage of 3 percent, while the footwear segment of the leather industry has a labor cost factor of 50 percent and an incentive coverage of 71 percent.

One surprise is that another segment of the leather industry, handbags and small leather goods, with essentially the same labor cost factor as footwear, has a dramatically lower incentive coverage figure, only 15 percent. This contrast stems from different market conditions for the two products. Shoes are sold in a highly competitive market. Moreover, the "grade" system has developed in this industry, wherein the price of the finished product determines the value of the labor content. Piece work incentives provide the mechanism by which this grade system operates. In the case of handbags and small leather goods, the product is not as standardized and there is not as much pressure on labor costs, consequently incentives are not as necessary.

A second measure of the nature of competition, the concentration ratio,<sup>4</sup> was also considered. Presumably, industries characterized by intense competition (a low concentration ratio) would use incentives more frequently as a means of controlling labor costs. An analysis of these data showed no relationship between the concentration ratio and the percentage of workers paid on an incentive basis.

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<sup>1</sup>"Extent of Incentive Pay in Manufacturing," pp. 460-463. The study covers 3-digit industry groups as defined in the 1945 edition of the *Standard Industrial Classification Manual*, prepared by the Bureau of the Budget. Most of the data for the independent variables is also based on the 1945 SIC scheme. For example, we used the preliminary version of the *1958 Census of Manufactures* which was organized on the 1945 basis. We feel there is little, if any, bias present in the few situations where the industrial groupings for the independent and dependent characteristics were not identical.

<sup>2</sup>This reason is most commonly given to explain the frequent use of incentives in men's and women's apparel, hosiery, and shoes. For example, see Sumner H. Slichter, James J. Healy, and E. Robert Livernash, *The Impact of Collective Bargaining on Management* (Washington, D.C., 1960), p. 523. These so-called "piece work" industries are all labor cost intensive.

<sup>3</sup>Labor cost was calculated as a percentage of adjusted value added. The basic data was obtained from the *Census of Manufactures*.

<sup>4</sup>In our analysis, we used a concentration ratio which measured the output of the four largest firms as a percentage of the total output (value of shipments) for that industry. The data was obtained from unpublished material of George J. Stigler that was based on information contained in: Report of the U.S. Senate, Subcommittee on Antitrust and Monopoly to the Committee on the Judiciary, 1st. sess., 85th Cong., *Concentration in American Industry* (1957), table 42, pp. 196-219.



## Material Cost

Presumably, under a wage incentive system, the inducement to maximize output may result in a higher percentage of rejects. Therefore, it has been assumed that incentives would be less feasible where materials represented an important cost item.

Our investigation revealed no relationship between cost of materials and incentive coverage.<sup>5</sup> This finding suggests that incentives do not produce such a brisk work pace that quality is jeopardized. No doubt, management is able to maintain quality standards through control methods and the installation of incentives is based on other considerations.

While material costs, as such, may not explain incentive coverage, quality considerations may have some bearing. In industries where precision or product control is important, incentives are not used as frequently, e.g., drugs and medicines (17 percent). It is also noteworthy that cutters and

markers in the garment industry are paid on a time basis.

## Degree of Technology

Presumably, extensive technology would make it difficult to increase output as well as to measure individual achievement and thus incentives would not be appropriate. But in some industries characterized by advanced technology, incentives are used rather frequently: knitting mills (64 percent), glass (45 percent), and electrical equipment (53 percent). What is the explanation? In these industries, incentives are used to enhance machine utilization. While a worker operating a knitting machine, tending a glass machine, or assembling electrical equipment cannot produce beyond the capacity of the equipment, he can minimize breakdowns and other problems which curtail output. Management is happy to pay incentive earnings if the expensive equipment can be used efficiently.

<sup>5</sup> Cost of materials was expressed as a percentage of value of shipments. The basic data was obtained from the *Census of Manufactures*.

TABLE 1. PERCENT OF PRODUCTION AND RELATED WORKERS PAID ON INCENTIVE BASIS, BY INDUSTRY GROUP, IN ORDER OF INCREASING LABOR COST AS PERCENT OF VALUE ADDED

SIC code	Industry group	Labor cost as percent of value added	Percent paid on incentive basis	SIC code	Industry group	Labor cost as percent of value added	Percent paid on incentive basis
331	Blast furnaces, steel works, and rolling mills	7.3	60	372	Aircraft and parts	38.6	4
211	Cigarettes	11.8	3	349	Miscellaneous fabricated metal products	38.7	18
283	Drugs and medicines	11.8	17	234	Women's and children's undergarments	39.9	52
289	Miscellaneous chemicals	14.9	12	344	Fabricated structural metal products	40.0	14
209	Miscellaneous food products	18.1	5	396	Costume jewelry, buttons, and notions	40.3	17
285	Paints, pigments, and fillers	19.1	13	339	Miscellaneous primary metal industries	40.9	42
204	Grain-mill products	19.5	7	267	Paperboard containers and boxes	41.1	20
208	Beverages	19.8	5	357	Office and store machines and devices	41.2	31
282	Industrial organic chemicals	21.9	5	322	Glass and glassware, pressed or blown	41.5	45
281	Industrial inorganic chemicals	22.7	8	359	Miscellaneous machinery parts	42.1	19
324	Cement, hydraulic	23.5	2	201	Meat products	42.3	18
386	Photographic apparatus	25.6	46	239	Other fabricated textile products	43.4	23
288	Vegetable and animal oils and fats	25.9	5	238	Miscellaneous apparel and accessories	43.5	50
205	Bakery products	27.1	5	387	Watches and clocks	44.2	24
207	Confectionery and related products	28.0	31	346	Miscellaneous stamping, coating, and engraving	44.5	22
203	Canning and preserving	30.1	12	233	Women's outerwear	44.8	63
271	Newspapers	30.8	7	251	Household furniture	44.9	25
329	Miscellaneous nonmetallic mineral products	31.2	22	354	Metal working machinery	45.6	24
382	Mechanical measuring and controlling instruments	31.3	32	317	Handbags and small leather goods	46.2	15
327	Concrete, gypsum, and plaster products	31.5	14	249	Miscellaneous wood products	46.3	13
352	Agricultural machinery and tractors	31.6	32	326	Structural clay products	46.4	31
353	Service industry and household machines	32.6	33	225	Children's outerwear	46.8	48
361	Electrical generating, transmission, distribution, and industrial apparatus	33.2	38	275	Knitting mills	47.1	64
356	General industrial machinery	33.4	32	243	Commercial printing	47.3	1
353	Construction and mining machinery	33.6	12	311	Millwork, plywood, and prefabricated structural wood products	48.0	7
394	Toys and sporting goods	36.5	24	311	Leather: tanned, curried, and finished	48.2	51
227	Carpets, rugs, and other floor coverings	36.6	40	326	Wool textiles	49.4	29
381	Laboratory, scientific, and engineering instruments	36.7	7	314	Pottery and related products	49.5	26
335	Rolling, drawing, and alloying of nonferrous metals	36.8	33	314	Footwear (except rubber)	49.8	70
391	Motor vehicles and equipment	36.8	13	231	Dyeing and finishing textiles	50.0	14
343	Jewelry, silverware, and plated ware	37.1	35	232	Men's and boys' suits and coats	50.3	71
342	Heating apparatus (except electric) and plumbers' supplies	37.7	31	336	Men's and boys' furnishings and work clothing	50.4	71
212	Cutlery, handtools, and hardware	38.1	44	332	Nonferrous foundries	50.7	23
304	Cigars	38.2	66	242	Iron and steel foundries	51.6	27
	Electrical equipment for vehicles	38.4	53	373	Sawmills and planing mills	54.5	5
					Synthetic textiles	55.4	29
					Ship and boat building and repairing	60.5	20
					Cotton textiles	61.5	36



While it is difficult to make predictive statements about incentive coverage for the middle range of the technological spectrum, it is possible to discern relationships at the extremes. For example, the industries characterized by considerable handwork use incentives extensively, e.g., photographic apparatus (46 percent), and cutlery, handtools, and hardware (44 percent). In contrast, the industries characterized by a lack of handwork use incentives infrequently, e.g., canning and preserving (12 percent), grain-mill products (7 percent), and textile dyeing and finishing (14 percent).

The state of technology can be analyzed along two dimensions: work station and work flow automation. In the following profile of technology, the industries were classified by these two dimensions, according to their characteristic technology. The percentages again relate to incentive coverage:

A PROFILE OF TECHNOLOGY

Work flow technology	Work station technology	
	Low	High
High	<i>Assembly industries</i> such as: agricultural machinery and tractors (32 percent), motor vehicles and equipment (13 percent), service and household machines (33 percent).	<i>Process industries</i> such as: canning and preserving (12 percent), grain-mill products (7 percent), and textile dyeing and finishing (14 percent).
Low	<i>Hand industries</i> such as: photographic apparatus (46 percent), and cutlery, handtools, and hardware (44 percent).	<i>Job shop industries</i> <sup>1</sup> such as: electrical generating equipment (38 percent), construction machinery (12 percent), ship and boat building (20 percent).

<sup>1</sup> In this instance, we are explaining the extent of incentive coverage in terms of technology, and the opportunity which it provides for worker control over output. The other connotation to the word, job shop, namely, a highly varied product line often characterized by short runs, also has a bearing on incentive coverage but in a different way. If the nature of the task is constantly changing, incentives cannot be installed. In the language of industrial engineering, the task is not standardized and incentives are not feasible. This would be the explanation for the low incentive coverage in the following industries: fabricated structural products (14 percent), millwork and prefabricated structural wood products (7 percent), and machinery parts (19 percent).

<sup>6</sup> The term, capital, portrays the book value of all fixed assets. The data was obtained from some unpublished material of George J. Stigler that was based on information contained in *Internal Revenue Service Source Book of Statistics of Income*. The value of capital was then expressed in terms of the number of production workers in the industry; the latter figure was obtained from the *Census of Manufactures*.

<sup>7</sup> H. M. Doty, "Collective Bargaining Coverage in Factory Employment, 1958," *Monthly Labor Review*, April 1960, p. 346.

<sup>8</sup> H. G. Lewis, *Unionism and Relative Wages in the United States: An Empirical Inquiry* (University of Chicago Press, December 1963).

At the extremes, where the state of technology is either low (hand industries) or high (process industries) on both dimensions, a relationship exists between technology and incentive prevalence. However, in the mixed cases no clear relationship exists. One can find some assembly line industries using incentives frequently (e.g., agricultural machinery and tractors, 32 percent), while others not so frequently (e.g., motor vehicles and equipment, 13 percent). Job shop industries show the same contrast (e.g., electrical generating equipment, 38 percent versus construction machines, 12 percent).

For a more formal analysis, we used capital investment per worker to measure the state of technology, assuming that a higher figure would mean a more advanced technology: more machine paced operations and greater use of conveyors and consequently a situation not feasible for incentives.

The data<sup>6</sup> (table 2) does confirm the informal analysis. There is no pattern to the incentive coverage for the industries falling within the middle range of incentive coverage. However, where the capital invested per worker is extremely low or high, a definite relationship exists. For example, cigars, men's and boys' clothing, and women's outerwear, with a capital investment per worker of less than \$900, pay over 60 percent of the workers on an incentive basis. At the other extreme, beverages, chemicals, soap, and cement industries, with a capital investment per worker greater than \$12,000, pay less than 8 percent of the workers on an incentive basis.

## Policies

Some union constitutions contain provisions against wage incentive systems and some union leaders periodically voice strong objections to their installation, leading to a widely held belief that unions generally oppose them.

The results of plotting data on union coverage<sup>7</sup> by two-digit industrial groupings shows no relationship between unionization and extent of incentive systems.

Data from a study<sup>8</sup> by H. G. Lewis were also used to test this relationship. A positive relationship existed between incentive coverage and union coverage as measured by the Lewis figures. Too much importance should not be placed on

the positive relationship,<sup>9</sup> but it appears that there is no strong negative relationship between union coverage and incentive coverage. This fact confirms a growing feeling that increased acceptance has developed among unions for the incentive principle. While many unions still officially oppose incentives, they accept them in practice and often object to their abandonment. Their main concern appears to be with rate cutting. Increased acceptance, no doubt, stems from the unions' increasingly professional and sophisticated approach to work measurement and the design of incentive systems. Today, many large unions employ industrial engineers and publish considerable material on wage payment matters. Many unions conduct time study training sessions for union personnel; a few designate time study stewards.

<sup>9</sup> Several reasons prompt us to be cautious about the positive relationship. Figures for incentive coverage grouped by two-digit industries had to be calculated from the three-digit figures. In some cases, three-digit categories were missing—as a result, certain approximations had to be made in order to calculate the two-digit estimates. Moreover, the final plot of incentive coverage versus union coverage contained only 14 observations—too small a number for establishing a definite trend.

<sup>10</sup> Average industry plant size was calculated by dividing total number of production workers by total number of establishments for the given industry. Basic data was obtained from the *Census of Manufactures*.

## Size and Stability

Wage incentive systems might be used more frequently where other motivational devices are not available. The following characteristics were used to test this assertion:

*Size of Establishment.* Many notions are expressed in the literature about the influence of plant size on motivation—one of the most common is that larger establishments are characterized by impersonal relations and management consequently must turn to other devices for motivating employees, possibly to the use of incentives. The results (table 3) do not indicate any clear relationship between size and incentive coverage.<sup>10</sup> For industries composed of plants whose average size ranged between 10 and 100 employees, there appears to be a positive relationship. Very small establishments (under 50 employees) are usually not able to apply industrial engineering techniques of standardization and wage incentives. Also, the entire firm is usually within the limits of the owner's "span of control" capabilities and the master-journeyman relationship permits workers to be motivated on an individual

TABLE 2. PERCENT OF PRODUCTION AND RELATED WORKERS PAID ON INCENTIVE BASIS, BY INDUSTRY GROUP, IN ORDER OF INCREASING CAPITAL INVESTED PER WORKER IN DOLLARS

SIC code	Industry group	Capital invested per worker (in dollars)	Percent paid on incentive basis	SIC code	Industry group	Capital invested per worker (in dollars)	Percent paid on incentive basis
396	Costume jewelry, buttons, and notions.....	\$276	17	205	Bakery products.....	\$3,590	5
234	Women's and children's undergarments.....	326	52	203	Canning and preserving.....	3,810	12
233	Women's outerwear.....	326	63	325	Structural clay products.....	4,180	31
231	Men's and boys' suits and coats.....	402	71	353	Construction and mining machinery.....	4,220	12
232	Men's and boys' furnishings and work clothing.....	402	71	343	Heating apparatus (except electric) and plumbing supplies.....	4,580	31
314	Footwear (except rubber).....	578	70	242	Sawmills and planing mills.....	4,670	5
212	Cigars.....	840	66	271	Newspapers.....	4,700	7
243	Millwork, plywood, and prefabricated structural wood products.....	955	7	349	Miscellaneous fabricated metal products.....	4,770	18
372	Aircraft and parts.....	1,058	4	327	Concrete, gypsum, and plaster products.....	5,010	14
391	Jewelry, silverware, and plated ware.....	1,422	35	211	Cigarettes.....	5,500	3
364	Electrical equipment for vehicles.....	1,650	53	204	Grain-mill products.....	5,520	7
311	Leather: tanned, curried, and finished.....	1,662	51	322	Glass and glassware, pressed or blown.....	5,650	45
225	Knitting mills.....	1,865	64	381	Motor vehicles and equipment.....	5,760	13
344	Fabricated structural metal products.....	1,870	14		Laboratory, scientific, and engineering instruments.....	6,810	7
336	Nonferrous foundries.....	1,918	23	382	Mechanical measuring and controlling instruments.....	6,880	32
326	Pottery and related products.....	1,986	26	239	Other fabricated textile products.....	6,890	23
317	Handbags and small leather goods.....	2,080	15	209	Miscellaneous food products.....	7,420	5
346	Miscellaneous stamping, coating, and engraving.....	2,220	22	285	Paints, pigments, and fillers.....	7,780	13
	Cotton textiles.....	2,255	36	357	Office and store machines and devices.....	7,810	31
342	Dyeing and finishing textiles.....	2,500	14	227	Carpets, rugs, and other floor coverings.....	7,910	40
332	Cutlery, handtools, and hardware.....	2,500	44	329	Miscellaneous nonmetallic mineral products.....	7,950	22
275	Iron and steel foundries.....	2,595	27	352	Agricultural machinery and tractors.....	8,060	32
238	Commercial printing.....	2,830	1	283	Drugs and medicines.....	8,670	17
358	Miscellaneous apparel and accessories.....	2,895	50	208	Beverages.....	11,900	5
356	Service industry and household machines.....	2,940	33	288	Vegetable and animal oils and fats.....	13,180	5
	General industrial machinery.....	3,132	32	324	Cement, hydraulic.....	13,230	2
201	Wool textiles.....	3,140	29	331	Blast furnaces, steel works, and rolling mills.....	13,540	60
207	Meat products.....	3,160	18	282	Industrial organic chemicals.....	18,630	5
359	Confectionery and related products.....	3,170	31	281	Industrial inorganic chemicals.....	18,700	8
339	Miscellaneous machinery parts.....	3,200	19	335	Rolling, drawing, and alloying of nonferrous metals.....	29,100	33
334	Miscellaneous primary metal industries.....	3,220	42				
354	Metal working machinery.....	3,492	24				
361	Electrical generating, transmission, distribution, and industrial apparatus.....	3,580	38				

basis. For example, the following "small establishment" industries rarely use incentives: bakery (with average employment of 28) 5 percent, sawmill (15), 5 percent, and printing (11), 1 percent. When an establishment grows above 50 employees, it becomes necessary and feasible to install incentives. Staff groups develop in order to handle the administrative problems that are concomitant with increasing size, and it becomes feasible to apply industrial engineering techniques, particularly, wage incentives.

For industries characterized by establishments having more than 100 employees, the positive relationship does not continue. For example, aircraft and parts, with an average of 304 employees per establishment, has an incentive coverage of only 4 percent.

The reason for this surprising finding must depend on the fact that in large plants management is in a position to enforce performance standards through control and evaluation techniques. It is also possible that automatic equipment which tends to be used more frequently in large com-

panies exerts enough stimulus on work pace that incentives are not as necessary.

*Stability of Employment.* Management might use wage incentives where work tenure was sufficiently short, since other rewards could not be used for motivational purposes. This tendency should be exhibited by industries with a high lay-off rate and a high quit rate.

The results indicate a slight positive relationship between layoff rate and incentive coverage (table 4) but no relationship between quit rate and incentive coverage.<sup>11</sup> This finding suggests a tendency for incentive systems to be used in those industries in which there is little job security, in order to attract and motivate labor.

### Predictors of Prevalence

We found no significant relationship between incentive coverage and the following industrial

<sup>11</sup> Both the layoff rate and quit rate were obtained from *Employment and Earnings*.

TABLE 3. PERCENT OF PRODUCTION AND RELATED WORKERS PAID ON INCENTIVE BASIS, BY INDUSTRY GROUP, IN ORDER OF INCREASING AVERAGE SIZE OF ESTABLISHMENT

SIC code	Industry group	Average size of establishment (number of workers)	Percent paid on incentive basis	SIC code	Industry group	Average size of establishment (number of workers)	Percent paid on incentive basis
275	Commercial printing.....	11	1	267	Paperboard containers and boxes.....	58	20
327	Concrete, gypsum, and plaster products.....	13	14	373	Ship and boat building and repairing.....	61	20
242	Sawmills and planing mills.....	15	5	343	Heating apparatus (except electric) and plumbers' supplies.....	63	31
239	Other fabricated textile products.....	15	23	352	Agricultural machinery and tractors.....	67	32
391	Jewelry, silverware, and plated ware.....	15	35	353	Construction and mining machinery.....	68	12
289	Miscellaneous chemicals.....	16	12	225	Knitting mills.....	68	64
249	Miscellaneous wood products.....	16	13	382	Mechanical measuring and controlling instruments.....	69	32
359	Miscellaneous machinery parts.....	16	19	232	Men's and boys' furnishings and work clothing.....	72	71
209	Miscellaneous food products.....	18	5	234	Women's and children's undergarments.....	73	52
271	Newspapers.....	18	7	231	Men's and boys' suits and coats.....	74	71
396	Costume jewelry, buttons, and notions.....	21	17	386	Photographic apparatus.....	81	46
204	Grain-mill products.....	21	7	381	Laboratory, scientific, and engineering instruments.....	81	7
208	Beverages.....	21	5	361	Electrical generating, transmission, distribution, and industrial apparatus.....	86	38
285	Paints, pigments, and fillers.....	22	13	387	Watches and clocks.....	90	24
346	Miscellaneous stamping, coating, and engraving.....	23	22	387	Wool textiles.....	91	29
354	Metal working machinery.....	23	24	332	Dyeing and finishing textiles.....	92	14
288	Vegetable and animal oils and fats.....	25	5	358	Iron and steel foundries.....	93	27
336	Nonferrous foundries.....	25	23	212	Cigars.....	95	66
344	Fabricated structural metal products.....	26	14	358	Service industry and household machines.....	98	33
243	Millwork, plywood, and prefabricated structural wood products.....	27	7	227	Carpets, rugs, and other floor coverings.....	115	40
205	Bakery products.....	28	5	281	Industrial inorganic chemicals.....	121	8
349	Miscellaneous fabricated metal products.....	28	18	314	Footwear (except rubber).....	159	70
238	Miscellaneous apparel and accessories.....	30	50	282	Industrial organic chemicals.....	171	5
317	Handbags and small leather goods.....	30	15	364	Synthetic textiles.....	173	29
233	Women's outerwear.....	31	63	335	Electrical equipment for vehicles.....	183	53
394	Toys and sporting goods.....	31	24	357	Rolling, drawing, and alloying of nonferrous metals.....	186	33
251	Household furniture.....	32	25	324	Office and store machines and devices.....	190	31
236	Children's outerwear.....	36	48	372	Cement, hydraulic.....	196	2
329	Miscellaneous nonmetallic mineral products.....	39	22	322	Aircraft and parts.....	304	4
283	Drugs and medicines.....	40	17	322	Glass and glassware, pressed or blown.....	330	45
201	Meat products.....	43	18	339	Cotton textiles.....	384	36
207	Confectionery and related products.....	45	31	331	Miscellaneous primary metal industries.....	832	42
356	General industrial machinery.....	49	32	211	Blast furnaces, steel works, and rolling mills.....	1,405	60
203	Canning and preserving.....	50	12		Cigarettes.....	1,631	3
342	Cutlery, handtools, and hardware.....	50	44				
326	Pottery and related products.....	56	26				
311	Leather: tanned, curried, and finished footwear (except rubber).....	56	51				
325	Structural clay products.....	58	31				



TABLE 4. PERCENT OF PRODUCTION AND RELATED WORKERS PAID ON INCENTIVE BASIS, BY INDUSTRY GROUP, IN ORDER OF INCREASING LAYOFF RATE

SIC code	Industry group	Layoff rate	Percent paid on incentive basis	SIC code	Industry group	Layoff rate	Percent paid on incentive basis
211	Cigarettes.....	0.3	3	356	General industrial machinery.....	1.9	32
283	Drugs and medicines.....	.6	17	326	Pottery and related products.....	2.0	26
285	Paints, pigments, and fillers.....	.7	13	234	Women's and children's undergarments.....	2.1	52
386	Photographic apparatus.....	.8	46	225	Knitting mills.....	2.2	64
205	Bakery products.....	.9	5	251	Household furniture.....	2.2	25
281	Industrial inorganic chemicals.....	.9	8	353	Construction and mining machinery.....	2.3	12
381	Laboratory, scientific, and engineering instruments.....	.9	7	249	Miscellaneous wood products.....	2.3	13
289	Miscellaneous chemicals.....	1.1	12	212	Cigars.....	2.3	66
282	Industrial organic chemicals.....	1.1	5	227	Carpets, rugs, and other floor coverings.....	2.4	40
	Synthetic textiles.....	1.2	29	311	Leather: tanned, curried, and finished.....	2.4	51
	Dyeing and finishing textiles.....	1.2	14	342	Cutlery, handtools, and hardware.....	2.4	44
	Cotton textiles.....	1.4	36	359	Miscellaneous machinery parts.....	2.5	19
357	Office and store machines and devices.....	1.4	31	322	Glass and glassware, pressed or blown.....	2.5	45
267	Paperboard containers and boxes.....	1.5	20	351	Blast furnaces, steel works, and rolling mills.....	2.6	60
382	Mechanical measuring and controlling instruments.....	1.6	32	352	Agricultural machinery and tractors.....	2.7	32
372	Aircraft and parts.....	1.6	4	344	Fabricated structural metal products.....	2.7	14
391	Jewelry, silverware, and plated ware.....	1.6	35	357	Watches and clocks.....	2.7	24
243	Millwork, plywood, and prefabricated structural wood products.....	1.8	7	332	Iron and steel foundries.....	2.8	27
343	Heating apparatus (except electric) and plumbers' supplies.....	1.8	31	231	Men's and boys' suits and coats.....	2.9	71
361	Electrical generating, transmission, distribution, and industrial apparatus.....	1.8	38	339	Miscellaneous primary metal industries.....	3.0	42
204	Grain-mill products.....	1.8	7	336	Nonferrous foundries.....	3.2	23
232	Men's and boys' furnishings and work clothing.....	1.9	71	354	Metal working machinery.....	3.3	24
242	Sawmills and planing mills.....	1.9	6	208	Beverages.....	3.3	5
314	Footwear (except rubber).....	1.9	70	207	Corfectionery and related products.....	3.4	31
324	Cement, hydraulic.....	1.9	2	358	Service industry and household machines.....	3.5	33
335	Rolling, drawing, and alloying of nonferrous metals.....	1.9	33	364	Electrical equipment for vehicles.....	3.5	53
349	Miscellaneous fabricated metal products.....	1.9	18	201	Meat products.....	3.9	18
				396	Wool textiles.....	4.0	29
				346	Costume jewelry, buttons, and notions.....	4.4	17
					Miscellaneous stamping, coating, and engraving.....	4.9	22
					Motor vehicles and equipment.....	5.3	13
					Toys and sporting goods.....	5.7	24
					Ship and boat building and repairing.....	9.1	20

characteristics: degree of competition in the industry (as measured by the concentration ratio), value of materials, percentage of employees covered by collective bargaining and the quit rate.

Positive relationships were found for: labor cost as a percentage of value added and the lay-off rate. A negative relationship was found for degree of technology; that is, the more technologically developed an industry, the lower the percentage of production workers paid on an incentive basis.

An initially positive relationship was found for size of establishment. However, for larger plant size no tendency was found.

The findings do suggest that certain specific factors are associated with the incidence of incentives. Many exceptions exist and in certain industries the association is not strong. For example, the high coverage in tanning and basic steel is unusual in view of the process technology

that is involved. Steel is particularly aberrant, violating every relationship. To explain these maverick situations, one would need to introduce certain historical factors. In the case of both steel and tanning, the wage payment method can be traced to the piecework system wherein the foreman acted as the subcontractor for a given operation, and the price served as the method of reimbursement.

In general, tradition seems to be an extremely important influence in explaining the extent of incentive coverage. Some industries have incentives today as a result of having adopted them years ago to get out the work. Newer<sup>12</sup> industries have not used incentives because of the availability of other motivational techniques. Several industries can be interpreted on this basis: An older industry such as carpets with an incentive coverage figure of 40 percent versus a newer industry such as aircraft and parts with an incentive coverage figure of 4 percent. But despite the importance of certain unique influences, such as historical accident and even managerial philosophy, certain relationships attest to the influence of economic and technological forces on the extent of incentive coverage.

<sup>12</sup> Additional support for this point is provided by the following statement from the *Monthly Labor Review*, May 1960, op. cit., p. 462. "Labor market wage surveys conducted by the Bureau provide additional evidence that incentive pay plans are less frequently employed in Pacific Coast areas than in other large areas." The variation in incentive coverage between East and West is also an expression of the variation in incentive coverage between older and newer plants.

# Demand and Trends in Prices for Urban Transit

GEOFFREY FAUX\*

FOR OVER A DECADE, average consumer prices have been pushed steadily upward by the rising costs of services, and a major contributor to higher service prices has been public transit fares. From 1950 to 1963, the Consumer Price Index for transit fares almost doubled, while the general retail price level was rising only a little more than one-fourth. The index for automobile transportation—the primary alternative to public transit—also advanced about one-fourth during the same 13 years (chart 1).

Rising transit fares have both reflected and contributed to the transportation difficulties besetting many of the Nation's urban areas. Spreading auto ownership and the growth of the suburbs have brought about a drastic drop in off-peak hour passengers. The transit industry thus maintains excess capacity for all but 20 to 25 hours a week. Costs have not declined in proportion to revenue loss, and operating margins are threatened. The usual response of operators and regulatory agencies has been to increase fares. Higher fares have accelerated the trend away from the use of public transportation, and the cycle continues.

Since price alone does not seem to be the overriding factor in the consumer's transportation choice, improvements in service are essential to attract enough off-peak hour riders for efficient transit operation. However, declining demand and rising fares have been accompanied by reductions in transit service, and improvements in comfort and convenience have not kept pace with competitive modes of transport. Most transit systems are not in a financial position to undertake the necessary investment, and in spite of some recent growth in passengers carried by rapid transit, total demand for public transit has continued to decline.

While it is generally recognized that deteriorating public transit is a community problem, disagreements over methods of financing improved service and over the extent of Federal participation have so far kept unbroken the cycle of increasing fares and declining demand. Until these basic issues are resolved, urban transit fares will probably continue to rise.

## Transit Fare Trends

In the 6 years prior to World War II, transit fares<sup>1</sup> remained almost stable while all services and commodity prices rose an average of about 1 percent a year. During and immediately after World War II, sharp increases in commodity prices drove average retail prices up over 50 percent. Transit fares, like most services, lagged behind. Between 1941 and 1947, the private transportation index advanced one-third because of large increases in automobile prices, while transit fares were rising less than 10 percent (table 1).

In the late 1940's, transit fares—along with most other services—began to respond to inflationary pressures and rose 37 percent between 1947 and 1950, while average retail prices slowed to an 8 percent increase. Transit fares have moved steadily upward since then, and in 1963, averaged 96 percent above their 1950 level—a rise more than double that of all service prices.

Although transit fares have been one of the most consistently inflationary items in the Consumer Price Index over the last decade, the rate of increase diminished after 1954. Between 1950 and 1954, they rose an average of 8.8 percent per

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<sup>1</sup>The CPI for transit fares covers bus, streetcar, and rapid transit. In the time period covered by the article, the transit fare index reflects price change in a representative local trip. Only adult cash fares, tokens, or weekly passes are included in the index; transfers, students' and children's discounts, and other special fares are specifically excluded. Where fares differed by zone, the fare in the zone serving the greatest number of passengers was used. In the January 1964 revision of the CPI, the index for transit fares was expanded to include all charges and zone differentials and is now a more comprehensive measure of transit prices in a given area.

Indexes for transit fares and interurban railroad fares (which do not include commuter railroads) are combined into a single CPI "public transportation" index. All three indexes are published regularly for the United States, and the "public transportation" index is available for 20 large cities.

The automobile or "private transportation" index is composed of items representing purchase, operation, maintenance, and fixed overhead costs of automobiles.

TABLE 1. PRICE CHANGES IN TRANSPORTATION ITEMS FOR SELECTED PERIODS, 1935-63

Consumer Price Index	Percent change in annual averages				Relative importance (December 1962) in—	
	1935-41	1941-47	1947-50	1950-63 <sup>2</sup>	CPI	Transportation component
All items.....	7.3	51.7	7.7	27.2	100.0	-----
Services.....	8.1	15.7	14.9	45.7	36.8	-----
Commodities.....	7.1	73.0	5.0	18.8	63.2	-----
Transportation.....	3.6	25.6	22.9	35.9	11.8	<sup>3</sup> 100.0
Public transportation.....	-1.5	8.9	35.7	80.7	1.7	14.4
Transit fares <sup>1</sup> .....	1.2	8.0	37.0	96.1	1.4	11.9
Interurban railroad fares <sup>1</sup> .....	-34.0	35.0	30.5	16.5	.3	2.5
Private transportation.....	6.1	34.0	17.8	28.5	10.1	85.5
Autos, new.....	13.4	48.6	20.5	23.2	2.8	23.7
Autos, used.....	(4)	(4)	(4)	(4)	1.8	15.3
Tires.....	3.0	17.1	13.4	13.5	.3	2.5
Gasoline.....	1.6	23.2	15.4	27.1	2.4	20.3
Motor oil.....	-2.1	13.0	15.1	33.0	.2	1.7
Auto repairs <sup>1</sup> .....	3.9	25.6	10.6	46.8	1.2	10.2
Auto registration <sup>1</sup> .....	3.5	-6.2	4.4	28.5	.3	2.5
Auto insurance <sup>1</sup> .....	1.3	30.6	25.8	77.3	1.1	9.3

<sup>1</sup> Transportation service.<sup>2</sup> Nine-month average for 1963.<sup>3</sup> Because of rounding, components do not add to 100.<sup>4</sup> Introduced into index December 1952.

year. Since 1954, the annual rate of increase has been about 4 percent.

### Suburban Growth and Auto Ownership

While peak-hour use of public transit has remained stable over the 1950-60 decade and even increased in some areas, off-peak traffic has dropped substantially. This decline in demand is rooted in the growth of the suburbs and the spread of automobile ownership.

Excluding territorial annexations, the central city population of the Nation's metropolitan areas rose only 2 percent between 1950 and 1960. The surrounding suburbs increased 62 percent. If annexations are included, the growth rates were 11 and 49 percent, respectively.<sup>2</sup>

Shopping, medical, and recreational facilities followed the population to the suburbs. In the overwhelming majority of metropolitan areas for which data are available, retail sales in the suburban ring increased faster than central city sales between 1948 and 1958.<sup>3</sup> Conveniently located

retail and service establishments freed the suburban consumer from dependence upon the downtown area and thus reduced demand for public transit to the central city, especially during off-peak hours.

Although many businesses, particularly manufacturing plants, have moved to the suburbs, the central city has remained the chief source of employment. Sixty percent of all workers in metropolitan areas of over 100,000—one-third of those living in the suburban ring and four-fifths of those living in central cities—were employed in the central city in 1960 (table 2). The demand for public transportation by workers commuting to and from the suburbs maintained, and in some cases increased, peak-hour use of transit facilities.

Even in the journey to work, however, public transportation is dwarfed by the automobile. Sixty-four percent<sup>4</sup> of workers living in metropolitan areas used an auto to get to work in 1960, including over half of those both living and working in the central city. In contrast, only 19 percent of metropolitan area workers used public transportation to reach their jobs.

Preliminary results from the Survey of Consumer Expenditures in 1960-61 conducted by the

TABLE 2. MEANS OF TRANSPORTATION TO WORK OF RESIDENTS OF STANDARD METROPOLITAN STATISTICAL AREAS OF 100,000 INHABITANTS OR MORE, 1960

Place of residence and employment	Workers		Percent of workers using—	
	Number	Percent	Public transportation <sup>1</sup>	Automobiles or carpools
All living in SMSA.....	41,777,034	100.0	18.7	63.5
Working in central city.....	24,792,466	59.3	25.6	60.8
Working in SMSA ring.....	13,352,793	32.0	5.7	75.0
Working outside SMSA of residence.....	1,610,835	3.9	15.2	76.2
Not reported.....	2,020,940	4.8	3.0	11.0
Living in central city.....	22,134,421	100.0	27.7	54.4
Working in central city.....	18,301,306	82.7	29.7	53.9
Working in SMSA ring.....	2,027,946	9.2	12.1	84.0
Working outside SMSA of residence.....	537,127	2.4	16.9	72.8
Not reported.....	1,268,042	5.7	3.3	7.1
Living in SMSA ring.....	19,642,613	100.0	<sup>2</sup> 8.7	<sup>2</sup> 73.7
Working in central city.....	6,491,160	33.0	15.0	80.2
Working in SMSA ring.....	11,324,847	57.7	4.6	73.3
Working outside SMSA of residence.....	1,073,708	5.5	14.7	77.9
Not reported.....	752,898	3.8	2.5	17.7

<sup>1</sup> Includes commuter railroads.<sup>2</sup> Excluding rural workers, the percentages using public transportation and automobiles are 10.1 and 74.0, respectively.

SOURCE: 1960 Census of Population, Place of Work and Means of Transportation to Work, 1960, Supplementary Report, PC (S1)-41 (U.S. Bureau of the Census), Jan. 30, 1963.

<sup>2</sup> Census of Population: 1960, Number of Inhabitants, United States Summary, PC (1) 1A (U.S. Bureau of the Census), table P.<sup>3</sup> 1958 Census of Business, Central Business Districts, Summary Report, BC58-CBD98 (rev.) (U.S. Bureau of the Census), table 2.<sup>4</sup> In addition to workers using public transportation and automobiles, a substantial proportion (13 percent) either walked to work, worked at home, or used other means of transportation.



TABLE 3. AUTO OWNERSHIP AND FAMILY EXPENDITURES FOR AUTO PURCHASE AND OPERATION, UNITED STATES AND 15 URBAN AREAS, 1950 AND 1960

Area	Percent of families owning autos, end of year		Average expenditures for autos in 1960	Auto expenditures as percent of total family expenditures in constant dollars	
	1960	1950		1960	1950
United States <sup>1</sup> .....	72	59	\$696	13.0	11.8
Atlanta.....	68	55	\$757	14.8	11.9
Baltimore.....	68	48	656	12.4	10.3
Boston.....	67	42	730	12.1	8.2
Chicago.....	70	54	787	12.8	10.1
Cleveland.....	81	65	759	11.7	12.2
Detroit.....	77	(2)	870	15.5	(2)
Los Angeles.....	85	72	1,002	16.3	15.1
New York.....	50	39	529	8.3	5.5
Northern New Jersey.....	80	58	833	13.2	9.1
Philadelphia.....	67	41	700	12.4	8.1
Pittsburgh.....	67	51	745	13.6	11.0
St. Louis.....	77	57	687	13.1	12.8
San Francisco.....	71	63	737	12.9	12.4
Seattle.....	76	65	655	11.1	13.4
Washington, D.C.....	72	(2)	658	11.3	(2)

<sup>1</sup> Preliminary, includes all U.S. urban areas.<sup>2</sup> Not available.

Bureau of Labor Statistics show that 72 percent of all urban families owned at least one auto in 1960, compared with 59 percent in 1950.<sup>5</sup> While total family expenditures increased 14 percent in constant dollars, real spending for automobile purchase and operation rose 26 percent. In 1960, automobiles accounted for 13 percent of all expenditures for current consumption by the average urban family, as against 12 percent in 1950.

Auto ownership and expenditures grew in every metropolitan area included in both the 1950 and 1960 surveys. Eighty percent of the families in Los Angeles, Cleveland, and northern New Jersey owned automobiles in 1960. The importance of automobile expenses in the family budget rose in all areas except Seattle and Cleveland, and reached a high of over 16 percent of all family expenditures in Los Angeles. Automobiles were least significant in New York where families allocated just 8 percent of current spending to auto pur-

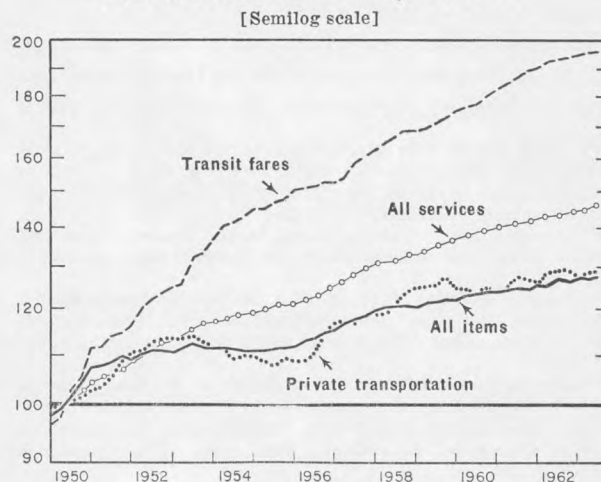
chase and operation. Even there, however, 50 percent of the families were car owners (table 3).

New York and Los Angeles represent the extremes in the physical characteristics which influence demand for public and private transportation. The former is an old city; many of its street patterns and neighborhoods were determined before the emergence of the automobile. Its population density is almost four times that of Los Angeles, and its physical setting deters large-scale highway building. On the other hand, Los Angeles' major growth has come in relatively recent years, with a population conditioned to individual car ownership. Its open areas and decentralized commercial centers are both cause and result of the use of the automobile as the chief means of urban transportation. Fifty-five percent of workers in the New York metropolitan area use public transportation; only 8 percent of those in Los Angeles do so.<sup>6</sup>

### The Changing Transit Industry

Between 1950 and 1962, the number of revenue passengers carried by the transit industry (both public and private systems) fell almost 50 percent, transit industry employment dropped 38 percent, and vehicle miles traveled declined 32 percent. Although increased fares maintained total revenue from transit operations at a point only 3.4 percent below 1950 levels, net income as a percent of operating revenue fell from 4.6 to 1.4 percent as costs and depreciation charges rose<sup>7</sup> (chart 2).

Chart 1. Trends in Transit Fares and Other Consumer Price Indexes (1950=100), 1950-63



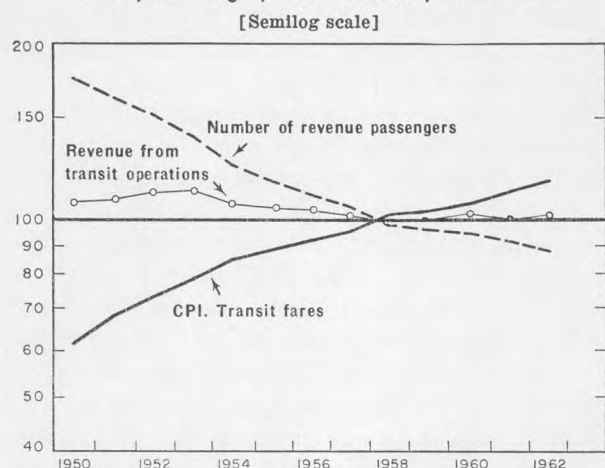
<sup>5</sup> The survey was conducted in 1961-62 in a sample of 66 urban places designed to represent all urban areas in the United States. The 1960 data was collected in 1961 from 39 areas including one-half of the sample in the 13 metropolitan areas of over 1,250,000 population which were surveyed in both 1961 and 1962.

A description of the survey and general tabulations for each area for 1960 can be found in the BLS advance reports (Series 237). For a description of the 1950 survey, see Helen H. Lamale, *Methodology of the Survey of Consumer Expenditures in 1950* (Philadelphia, University of Pennsylvania, 1959).

<sup>6</sup> *Census of Population: 1960, Place of Work and Means of Transportation to Work*, Supplementary Report, PC (SI) 41 (U.S. Bureau of the Census), 1963.

<sup>7</sup> *Transit Fact Book* (New York, American Transit Association), 1963.

Chart 2. Indexes (1957-59=100) of Local Transit Fares, Passenger, and Revenue, 1950-62



Source: *Transit Fact Book*, American Transit Association, 1963. All indexes constructed by the Bureau of Labor Statistics.

The reduction in riders has varied substantially among the several types of public transit, with surface railway and trolley systems experiencing the greatest losses. Passengers carried by bus lines have also decreased, but to a lesser extent. Because bus systems are more flexible and require less fixed investment than railway and trolley lines, their share of total riders has been expanding since the 1930's. This enlarged share resulted partly from conversion of former railway and trolley lines to bus lines. The proportion of transit passengers carried by buses rose from 56 to 67 percent between 1950 and 1962 (table 4). Consequently, transit system costs and fares have become more vulnerable to the effects of traffic congestion. As early as 1953, it was estimated that 10 percent of the cost of bus operation was due to traffic delays.<sup>8</sup>

In recent years, rapid transit systems in large cities<sup>9</sup> have been an exception to the general decline in demand for transit. From 1958 to 1962,

revenue passengers carried by rapid transit rose 4 percent, compared with an 8-percent decrease for all transit modes. In some cases, increasing traffic congestion in large central cities has resulted in rapid transit becoming the only efficient means of daytime transportation. Rapid transit modernization programs and service improvements have also played a role in attracting more riders.

### Effect Upon Cities

Preference for automobile rather than public transportation has increased both the number of vehicles using urban streets and the cost of accommodating them. Between 1950 and 1962, passenger vehicle miles traveled on urban streets rose about 65 percent<sup>10</sup> and total highway expenditures by municipal governments more than doubled.<sup>11</sup>

Although total public expenditures for motor vehicle facilities about equal total revenue from motor vehicle use taxes, the distribution of these revenues among urban and rural areas is uneven. As a result, many cities are forced to subsidize from general funds roads and other facilities required for automobile travel. Subsidies have been estimated at \$50 annually per car for Philadelphia, \$85 for Chicago, and \$90 for Milwaukee.<sup>12</sup> These are direct expenses and do not reflect the decline in revenues from the constraints traffic congestion imposes upon the private economy of cities and the allocation of more land to nontaxable highways.

Despite traffic dilemmas in large metropolitan areas, in terms of financial distress and service deterioration the problems of public transit are often more severe in smaller cities. Between 1953 and 1962, the number of revenue passengers declined 58 percent in areas with less than 50,000 population and only 25 percent in areas with over

TABLE 4. PASSENGERS CARRIED ON UNITED STATES TRANSIT LINES, 1950, 1958, AND 1962

Type of service	Number of revenue passengers (in millions)			Percent distribution		
	1950	1958	1962	1950	1958 <sup>1</sup>	1962
All transit modes.....	13,845	7,778	7,122	100.0	100.0	100.0
Surface railway, electric.....	2,790	415	284	20.1	5.3	4.0
Rapid transit.....	2,113	1,635	1,704	15.3	21.0	23.9
Trolley coach.....	1,261	593	361	9.1	7.6	5.1
Motor bus.....	7,681	5,135	4,773	55.5	66.0	67.0

<sup>1</sup> Because of rounding, components do not add to 100.

SOURCE: American Transit Association, *Transit Facts* 1963, table 6, p. 7.

<sup>8</sup> Wilfred Owen, *The Metropolitan Transportation Problem* (Washington, Brookings Institution, 1956), p. 87.

<sup>9</sup> Rapid transit systems are currently operated in Boston, Chicago, Cleveland, Philadelphia, and New York.

<sup>10</sup> *Estimated Motor Vehicle Travel in the United States and Related Data* (U.S. Bureau of Public Roads, 1950 and 1962), table VM-1.

<sup>11</sup> *Highway Finance, 1947-56* (U.S. Bureau of Public Roads, 1957), table HF-2; and *Total Disbursements for Highways, All Units of Government* (U.S. Bureau of Public Roads, 1962), table HF-2.

<sup>12</sup> *National Transportation Policy, Report of the Committee on Commerce by Its Special Study Group on Transportation Policies in the United States* (U.S. Senate, Committee on Interstate and Foreign Commerce, 87th Cong., 21st sess., 1961, Committee Print), p. 606.

500,000 population.<sup>13</sup> At the same time, fares in small cities rose faster. The following are simple averages of transit fare increases among urban areas in the Consumer Price Index sample between 1953 and 1962:

1950 area size	Average increase in fares (in percent)
Over 1,000,000.....	50
240,000 to 1,000,000.....	54
30,000 to 240,000.....	89
2,500 to 30,000.....	110

On the whole, larger metropolitan areas are the most dependent upon public transit. Of all urban workers, 16 percent used public transportation in their journey to work in 1960; 26 percent of those residing in metropolitan areas of more than 1 million did so.<sup>14</sup> Spending for public transit was also positively related to population size. Public transit expenditures in 1960 averaged \$54 per family in urban areas of over 1,250,000 compared with only \$5 per family in areas with fewer than 50,000 people. The proportion of families reporting any expenditures on public transit ranged from 7 out of 10 in the largest areas to less than 2 out of 10 in the smallest (table 5). Transit expenditures as a percentage of expenditures for automobile purchase and operation by area size were as follows:

1960 area size	Expenditures for transit as percentage of auto expenditures
Over 1,250,000.....	7.3
250,000 to 1,250,000.....	3.9
50,000 to 250,000.....	2.4
2,500 to 50,000.....	.8

Because public transit plays a more important role in the larger cities, greater effort is usually made there than in small cities to sustain the operations of a financially deteriorating system. Tax relief, direct financial assistance, and public acquisition have all been used in large urban areas to keep transit systems running. Where public transit users make up a smaller proportion of the population, a financial crisis has often resulted in drastic cuts in service and even abandonment

TABLE 5. FAMILY EXPENDITURES FOR PUBLIC TRANSIT AND FOR AUTO PURCHASE AND OPERATION, 39 URBAN AREAS, 1960

Area and population class	Percent of families reporting public transit expenditures	Average annual expenditures for—	
		Public transit <sup>2</sup> (in dollars)	Automobile purchase and operation (in dollars)
1,250,000 OR OVER			
All areas <sup>1</sup> .....	71.3	\$54	\$744
Baltimore.....	74.6	\$43	\$656
Boston.....	80.2	43	730
Chicago.....	79.1	78	787
Cleveland.....	81.3	54	759
Detroit.....	54.6	33	870
Los Angeles.....	40.8	13	1,002
New York.....	87.3	87	529
Northern New Jersey.....	69.0	52	833
Philadelphia.....	78.1	59	700
Pittsburgh.....	82.4	67	745
St. Louis.....	65.6	36	687
San Francisco.....	66.0	32	737
Washington, D.C.....	66.4	43	658
250,000 TO 1,250,000			
All areas <sup>1</sup> .....	60.1	28	712
Atlanta.....	58.1	\$31	\$757
Buffalo.....	63.3	35	809
Dallas.....	42.1	19	837
Indianapolis.....	65.9	24	585
Seattle.....	69.9	31	655
50,000 TO 250,000			
All areas <sup>1</sup> .....	50.7	16	670
Austin, Tex.....	38.2	\$10	\$637
Cedar Rapids, Iowa.....	54.4	14	851
Champaign-Urbana, Ill.....	42.1	12	662
Orlando, Fla.....	37.7	15	802
Portland, Maine.....	75.6	28	472
2,500 TO 50,000			
All areas <sup>1</sup> .....	17.2	5	600
Burlington, Vt.....	46.2	\$15	\$419
Cleveland, Tenn.....	4.7	3	622
Devils Lake, N. Dak.....	4.1	( <sup>3</sup> )	586
Findlay, Ohio.....	0	0	775
Gallup, N. Mex.....	1.7	( <sup>3</sup> )	865
Griffin, Ga.....	0	0	298
Kingston, N. Y.....	48.9	11	577
Klamath Falls, Oreg.....	6.8	2	879
LaSalle, Ill.....	56.4	13	596
Lewistown, Pa.....	12.2	5	621
McAllen, Tex.....	5.3	( <sup>3</sup> )	507
Niles, Mich.....	3.3	( <sup>2</sup> )	819
Owatonna, Minn.....	22.9	4	536
Reserve, La.....	0	0	465
Union, S.C.....	2.0	( <sup>3</sup> )	523
Vicksburg, Miss.....	61.8	25	373

<sup>1</sup> Preliminary.

<sup>2</sup> Streetcar, bus, subway, elevated.

<sup>3</sup> Less than \$1.

of the transit system. Between 1954 and 1962, 193 transit franchises were abandoned in the United States, most of them in cities of less than 50,000 population. At the beginning of 1963, 69 U.S. cities with populations between 25,000 and 77,000 were without organized transit service.<sup>15</sup>

### Demand-Price Relationships

In terms of constant dollar expenditures, demand for public transit fell between 1950 and

<sup>13</sup> American Transit Association, op. cit., table 7, p. 8.

<sup>14</sup> *Census of Population: 1960, General Social and Economic Characteristics, United States Summary, PC (I) IC* (U.S. Bureau of the Census), table 94, p. 224, and *Place of Work and Means of Transportation* (U.S. Bureau of the Census, 1963), table 302, p. 4.

<sup>15</sup> *Urban Mass Transportation—1963, Hearings* (U.S. Senate, Committee on Banking and Currency, 88th Cong., 1st sess., 1963, Committee Print), pp. 266–267.



1960 in all 13 urban areas for which BLS price and expenditure data are available (table 6). Reductions ranged from 12 to 74 percent and, in every area except New York and northern New Jersey, real spending for transit dropped at least 30 percent. During the same period, the price index for public transportation (80 percent of which is composed of transit fares) rose by a minimum of 30 percent in each area. In St. Louis, Philadelphia, and Pittsburgh, the increase was over 80 percent.

Rising fares, however, are not the only explanation of decreasing demand. Where public transit and automobiles directly compete, service factors often have a more pronounced effect upon the consumers' choice. For example, in a 1956 survey, 43 percent of Chicago commuters who had alternate means available chose their current means of transportation to work because it took them "less time." "Comfort" was the reason given by 23 percent of those interviewed, and "less walking" by 11 percent. Only 7 percent of the commuters said they decided on the basis of "less cost."

Among public transit users, however, "less cost" was the primary motive in 15 percent of the cases, while only 1 percent of auto users drove because of cost considerations. Thus, where cost was important, the commuter generally chose public transit.<sup>16</sup>

The extent to which transit and automobile costs are competitive in any specific case depends to a large degree on the number of passengers and the relevance of total expenses. The following average costs were estimated for various modes of transit in 1958:<sup>17</sup>

	Cents per mile
Suburban rail coach (commuter) .....	2. 57
Rail transit .....	3. 2
Bus transit .....	3. 2
Auto: Out-of-pocket costs <sup>1</sup>	
1 passenger .....	3. 5 -4. 0
2 passengers .....	1. 75-2. 0
3 passengers .....	1. 17-1. 33
Auto: Fully allocated costs <sup>1 2</sup>	
1 passenger .....	10-11
2 passengers .....	5-5. 5
3 passengers .....	3. 33-3. 7

<sup>1</sup> Does not include parking fees.

<sup>2</sup> Includes insurance, license, overhead, depreciation.

While total cost to the commuter of taking his car includes fully allocated costs, it is doubtful

that these expenses influence his choice significantly. The decision to purchase an automobile and, therefore, to incur the fixed costs of ownership, is often based upon recreational, social, and psychological factors unrelated to the competition between private and public transit. Moreover, because of the automobile's flexibility there is often no alternative, at any realistic price, to owning a car. Thus, once the commitment of ownership has been made, price competition usually involves comparisons with the marginal operating or "out-of-pocket" costs.

Since 1950, price advances for fixed and operating auto costs in the CPI have averaged about the same. Operating costs—gasoline and oil—rose 28 percent.<sup>18</sup> The fixed costs—purchase, insurance, repairs, and registration—rose 30 percent. Increases in both groups were well below the 96 percent increase in transit fares.

### Effect Upon Income Groups

The burden of higher transit fares appears to fall primarily upon those most dependent upon public transit: the low-income residents of the central cities. Twenty-six percent of workers living in central cities used public transportation in 1960; only 11 percent of those living in the urban fringe did so.<sup>19</sup> The difference is probably even greater for purposes other than work.

Central city families average lower incomes than those living in the suburbs. In 1959, median income for families living in central cities was \$5,949 compared with \$7,114 for urban fringe families. More significant, 18 percent of central city families in 1960 had incomes below \$3,000 a year, compared with 10 percent of urban families outside the central city.<sup>20</sup> At this income level,

<sup>16</sup> *The Mass Transportation Problem in Illinois* (Illinois Mass Transit Commission, 1959).

<sup>17</sup> U.S. Senate, Committee on Interstate and Foreign Commerce, op. cit., p. 560.

<sup>18</sup> Parking fees—which were not included in the CPI during the above period—often constitute the most important operating cost and can radically alter any comparative advantage automobiles may have. Parking fees have been added in the January 1964 revision of the CPI.

<sup>19</sup> *Census of Population: 1960, General Social and Economic Characteristics, United States Summary*, PC (I) IC (U.S. Bureau of the Census), table 100, p. 236. These figures refer to urbanized areas and differ slightly from those presented in table 2. The urban fringe is that portion of the urbanized area outside the central city.

<sup>20</sup> Ibid., table 152, p. 325.

the proportion of families owning automobiles drops sharply. Results from the 1960 BLS expenditure survey show that, even in Los Angeles where 85 percent of the families owned autos, only one-third of the families with incomes below \$3,000 were car owners.<sup>21</sup> Negro families, whose incomes are below the national average and who are often restricted in moving to the suburbs, had a smaller than average percentage of car-owning families in 22 of the 23 largest areas surveyed. Families headed by persons over 65 years of age also reported proportionally fewer auto owners than did urban families in general (table 7).

Although adequate measures of price change for separate income groups are not available, heavier reliance upon public transit by low-income families and the increase in "public" relative to "private" transportation prices suggests that these families have experienced greater inflation in local transportation costs than those in the middle and upper brackets.

### Public Transit and Urban Growth

In recent years, there has been a growing awareness of the importance of public transit to the economic health of urban centers. Breaking the cycle of rising fares and declining ridership has thus become an essential element in city planning. While specific community problems differ, improvements in scheduling, speed, and comfort are being studied in almost all areas, as well as extension of service. In some cities, the transit systems are being redesigned in the light of overall

TABLE 6. PUBLIC TRANSPORTATION PRICES AND FAMILY EXPENDITURES FOR PUBLIC TRANSIT IN 13 URBAN AREAS, 1950 TO 1960

Area	Average annual family expenditures (in current dollars)			CPI: Public transportation, 1960 (1950=100)	Percent change in constant dollar expenditures, 1950-60
	1960	1950	Percent change, 1950-60		
Atlanta.....	\$31	\$42	-26.2	177.7	-59.5
Baltimore.....	43	53	-18.9	167.6	-50.9
Boston.....	43	65	-33.8	132.1	-49.2
Chicago.....	78	73	+6.8	160.1	-32.9
Cleveland.....	54	54	0	149.5	-33.3
Los Angeles.....	13	27	-51.9	178.1	-74.1
New York.....	87	66	+31.8	151.1	-12.1
Northern New Jersey.....	52	42	+23.8	151.1	-19.0
Philadelphia.....	59	66	-10.6	184.1	-51.5
Pittsburgh.....	67	63	+6.3	186.1	-42.9
St. Louis.....	36	51	-29.4	197.6	-64.7
San Francisco.....	32	37	-13.5	175.2	-51.4
Seattle.....	31	37	-16.2	157.2	-45.9

TABLE 7. AUTO OWNERSHIP, BY RACE, AGE OF FAMILY HEAD, AND INCOME, IN 23 URBAN AREAS, 1960

Area and population class	Percent of families owning automobiles					
	All families	Negro families	Head over 65 years	Annual family income		
				Under \$3,000	\$3,000 to \$7,499	\$7,500 and over
1,250,000 OR OVER						
Baltimore.....	68	41	42	15	76	93
Boston.....	67	(1)	45	11	68	93
Chicago.....	70	42	43	16	71	93
Cleveland.....	81	40	61	48	81	92
Detroit.....	77	30	44	32	75	98
Los Angeles.....	85	(1)	54	33	92	98
New York.....	50	36	8	0	49	79
Northern New Jersey.....	80	50	50	33	80	98
Philadelphia.....	67	24	41	13	75	97
Pittsburgh.....	67	30	28	19	75	86
St. Louis.....	77	46	55	27	90	92
San Francisco.....	71	(1)	30	13	77	98
Washington.....	72	56	29	10	72	93
250,000 TO 1,250,000						
Atlanta.....	68	31	38	21	81	97
Buffalo.....	76	50	68	33	81	98
Dallas.....	83	50	50	41	93	100
Indianapolis.....	72	46	41	26	76	100
Seattle.....	76	(1)	27	25	78	96
50,000 TO 250,000						
Austin.....	79	50	64	53	95	87
Cedar Rapids.....	80	(1)	52	36	87	100
Champaign-Urbana.....	83	85	63	50	89	97
Orlando.....	83	18	60	32	95	100
Portland, Maine.....	64	(1)	44	30	71	100

<sup>1</sup> Less than 10 Negro families in sample.

urban development; in others, there are plans for the introduction of public transit where none now exists. In many metropolitan areas, the relative merits of bus and rapid transit systems are being reevaluated. The costs of the necessary investment, in all areas, are extremely high.

Transit systems themselves, whether private or publicly owned, are generally in no position to muster the required capital. Moreover, the inverse relationship between price and demand defeats any attempt to finance investment directly from the "fare box." While it is recognized that public investment is essential,<sup>22</sup> the respective roles

<sup>21</sup> Income distributions tabulated from the Consumer Expenditure Survey are for after tax income, while the Census Bureau definitions relate to income before tax deductions. In addition, the basic criterion for the CES family, or consuming unit, is the pooling of income (and major expenditures) rather than the social family relationship. Among differences in the definition of before tax income are the inclusion in the CES of food and housing received as pay and the deduction of certain occupational expenses.

<sup>22</sup> See U.S. Senate, Committee on Interstate and Foreign Commerce, op. cit., Pt. VII; U.S. Senate, Committee on Banking and Commerce, op. cit.; *Urban Mass Transportation Act of 1962*, Hearings (U.S. House of Representatives, 87th Cong., 2d sess., 1962).

TABLE 8. ANNUAL RATE OF CHANGE IN TRANSIT FARES, 1953-63

Period	Percent change in annual averages	Quarterly periods	Year-to-year percent change
1953-54.....	8.9	1960-61: IV.....	5.2
1954-55.....	4.1	1961-62: I.....	4.3
1955-56.....	3.9	II.....	4.1
1956-57.....	3.0	III.....	3.3
1957-58.....	6.0	IV.....	2.4
1958-59.....	3.1	1962-63: I.....	2.4
1959-60.....	3.9	II.....	1.9
1960-61.....	4.4	III.....	2.2
1961-62.....	3.9		

of Federal, State, and local governments have not been resolved.<sup>23</sup>

Disagreement also exists over whether the investment, once made, should be self-liquidating. Some maintain that fares should eventually cover costs; others feel that the community as a whole benefits and should shoulder part of the burden. The relative efficiency of buses and rapid transit lines is an additional area of frequent dispute.

Fare reductions during off-peak hours may offer another means of attracting passengers. In support of fare increases, operators have generally maintained that within the relevant range the demand for transit is inelastic. For the same reason, it is argued that reducing fares will result in relatively small gains in traffic and large losses in revenue. In addition, while there is no question that increasing fares diminishes demand, it is not certain that the upward response of riders to fare reduction would follow the same curve. Once consumers have adjusted to new commuting arrangements, they may be reluctant to shift back to public transit even at the former price level. It has been suggested, however, that the price elasticity of off-peak hour demand may be higher than that of rush-hour traffic.<sup>24</sup> Under these circumstances, a system of differential rates giving discounts to riders during off-peak hours (when operators' marginal costs are lower) might contribute to the profitability of transit operation.

The Housing and Home Finance Administration is testing solutions to mass transportation problems in a series of "demonstration projects" authorized under the Housing Act of 1961. Two of these, in Boston and Philadelphia, involve combinations of rate reductions and service improvements. The experiments are expected to provide some measure of the effectiveness of fare reductions in regaining ridership.

## Outlook for Transit Fares

Since the beginning of 1962, the rate of increase in transit fares has been somewhat below the average for recent years (table 8). Because of the involved procedures for setting rates,<sup>25</sup> however, individual transit fares change at discrete intervals, and it is difficult to determine the significance of short-run movements.

The deceleration in the increase in transit fares, however, may be related to the slowing down of the rate of decline in revenue passengers carried by transit systems. Since 1958, the annual percentage change in transit traffic has averaged -2.2 percent, compared with -5.8 percent in the 4 previous years. If rapid transit systems, which have experienced gains in revenue passengers, are excluded, the decline averages 3.1 since 1958, compared with 6.6 percent for the 1954-58 period.

One explanation may be that a smaller proportion of those currently riding public transit have any alternative; they are now either peak-hour riders or members of low-income families. In addition, the pressure of traffic congestion, coupled with some improvements in transit service and rehabilitation of downtown areas, may have begun to inhibit the shift away from public transportation.

In spite of the recent deceleration, the rate of increase in transit fares remains high. From March 1961 to September 1963, transit fares rose 8 percent compared to a 3-percent rise in average consumer prices. Until decisions are made concerning the most suitable transportation "mix," methods of financing, and the speed with which programs are to be enacted, the basic upward pressures upon transit fares are likely to continue. Stability of transit fares, for both the individual locality and the Nation as a whole, depends upon a solution to the overall problem of urban transportation.

<sup>23</sup> A bill authorizing Federal aid to urban mass transportation is now awaiting action in the Congress.

<sup>24</sup> See U.S. Congress, Senate Committee on Interstate and Foreign Commerce, op. cit., p. 561; William S. Vickrey, "Pricing in Urban and Suburban Transport," *American Economic Review*, May 1963, p. 452.

<sup>25</sup> In virtually all U.S. cities, fare changes must have some form of approval from a local or State agency.



# Summaries of Studies and Reports

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## Poverty in America

EDITOR'S NOTE.—*The following article is an excerpt from Chapter 2 of The Annual Report of the Council of Economic Advisers which was submitted with the January 1964 Economic Report of the President to the Congress. For ease of reading, omissions from text have not been indicated.*

THE POOR INHABIT a world scarcely recognizable, and rarely recognized, by the majority of their fellow Americans. It is a world apart, whose inhabitants are isolated from the mainstream of American life and alienated from its values. It is a world where Americans are literally concerned with day-to-day survival, where a minor illness is a major tragedy, where pride and privacy must be sacrificed to get help, where honesty can become a luxury and ambition a myth. Worst of all, the poverty of the fathers is visited upon the children.

### The Nature and Extent of Poverty

Measurement of poverty is not simple, either conceptually or in practice. By the poor, we mean those who are not now maintaining a decent standard of living—those whose basic needs exceed their means to satisfy them. A family's needs depend on many factors, including the size of the family, the ages of its members, the condition of their health, and their place of residence. The ability to fulfill these needs depends on current income from whatever source, past savings, ownership of a home or other assets, and ability to borrow.

There is no precise way to measure the number of families who do not have the resources to provide minimum satisfaction of their own particular needs. Since needs differ from family to

family, an attempt to quantify the problem must begin with some concept of average need for an average or representative family. [Various] studies provide support for using, as a boundary, a family whose annual money income from all sources was \$3,000 (before taxes and expressed in 1962 prices).

*The Changing Extent of Poverty.* There were 47 million families in the United States in 1962. Fully 9.3 million, or one-fifth of these families—comprising more than 30 million persons—had total money incomes below \$3,000. Over 11 million of these family members were children, one-sixth of our youth. More than 1.1 million families are now raising four or more children on such an income. Moreover, 5.4 million families, containing more than 17 million persons, had total incomes below \$2,000. More than a million children were being raised in very large families (six or more children) with incomes of less than \$2,000.

Serious poverty also exists among persons living alone or living in nonfamily units such as boarding houses. In 1962, 45 percent of such “unrelated individuals”—5 million persons—had incomes below \$1,500, and 29 percent—or more than 3 million persons—had incomes below \$1,000. Thus, by the measures used here, 33 to 35 million Americans were living at or below the boundaries of poverty in 1962—nearly one-fifth of our Nation.

The substantial progress made since World War II in eliminating poverty is shown in table 1. In the decade 1947–56, when incomes were growing relatively rapidly, and unemployment was generally low, the number of poor families (with incomes below \$3,000 in terms of 1962 prices) declined from 11.9 million to 9.9 million, or from 32 to 23 percent of all families. But from 1957 through 1962, when total growth was slower and unemployment substantially higher, the number of families living in poverty fell less rapidly, to 9.3 million, or 20 percent of all families.

The progress made since World War II has not involved any major change in the distribution of

TABLE 1. MONEY INCOME OF FAMILIES, 1947 AND 1950-62

Year	Median money income of all families (1962 prices)		Percent of families with money income of—	
	Dollars	Index (1947=100)	Less than \$3,000 (1962 prices)	Less than \$2,000 (1962 prices)
1947.....	4,117	100	32	18
1950.....	4,188	102	32	19
1951.....	4,328	105	29	17
1952.....	4,442	108	28	17
1953.....	4,809	117	26	16
1954.....	4,705	114	28	17
1955.....	5,004	122	25	15
1956.....	5,337	130	23	14
1957.....	5,333	130	23	14
1958.....	5,329	129	23	14
1959.....	5,631	137	22	13
1960.....	5,759	140	21	13
1961.....	5,820	141	21	13
1962.....	5,956	145	20	12

SOURCES: U.S. Department of Commerce and Council of Economic Advisers.

incomes. The one-fifth of families with the highest incomes received an estimated 43 percent of total income in 1947 and 42 percent in 1962. The one-fifth of families with the lowest incomes received 5 percent of the total in 1947 and 5 percent in 1963.

Even if poverty should hereafter decline at the relatively more rapid rate of the 1947-56 period, there would still be 10 percent of the Nation's families in poverty in 1980. And, if the decline in poverty proceeded at the slower rate achieved from 1957 on, 13 percent of our families would still have incomes under \$3,000 in 1980. We cannot leave the further wearing away of poverty solely to the general progress of the economy.

*The Composition of Today's Poor.* Objective evidence indicates that poverty is pervasive. The poor are found among all major groups in the population and in all parts of the country. Using the income measure of poverty described [earlier], we find that 78 percent of poor families are white. Although one-third of the poor families are headed by a person 65 years old and over, two-fifths are headed by persons 25 to 54. Although it is true that a great deal of poverty is associated with lack of education, almost 4 million poor families (39 percent) are headed by a person with at least some education beyond grade school. Less than half the poor live in the South. And the urban poor are somewhat more numerous than the rural poor. In [the accompanying chart], the poor and non-poor are compared in terms of these and other characteristics.

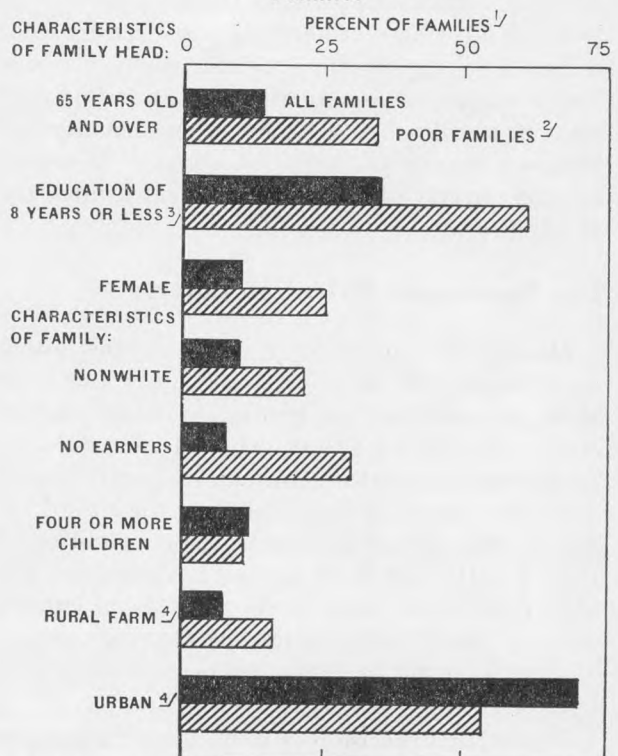
## The Roots of Poverty

*Earned Income.* Why do some families have low earned incomes? Some are unemployed or partially unemployed. High overall employment is a remedy of first importance, yet it is clear that this is only a partial answer. Even for those able and willing to work, earnings are all too frequently inadequate, and a large number of the poor are unable to work. The incidence of poverty is 76 percent for families with no earners. The incidence rate is 49 percent for families headed by persons who work part time.

The problem of another group of families is the low rates of pay found most commonly in certain occupations. For example, the incidence of poverty among families headed by employed persons is 45 percent for farmers and 74 percent for domestic service workers.

The chief reason for low rates of pay is low productivity, which in turn can reflect lack of education or training, physical or mental disability, or

## Characteristics of Poor Families Compared With All Families



<sup>1</sup> Based on 1962 data (except as noted).

<sup>2</sup> Families with income of \$3,000 or less.

<sup>3</sup> Based on 1961 income (1962 prices).

<sup>4</sup> Based on 1959 data.

SOURCE: Department of Commerce.

TABLE 2. INCIDENCE OF POVERTY BY EDUCATION, COLOR, AND RESIDENCE, 1962

Selected characteristic	Incidence of poverty (percent)	Selected characteristic	Incidence of poverty (percent)
All families.....	20	Color of family:	
Education of head: <sup>1</sup>		White.....	17
8 years or less.....	37	Nonwhite.....	44
9 to 11 years.....	20	Residence of family:	
12 years.....	12	Farm.....	43
More than 12 years.....	8	Nonwhite.....	84
		Nonfarm.....	18

<sup>1</sup> Data relate to 1961, and money income in 1962 prices.

NOTE: Data relate to families and exclude unrelated individuals. Poverty is defined to include all families with total money income of less than \$3,000; these are also referred to as poor families. The incidence of poverty is measured by the percent that poor families with a given characteristic are of all families having the same characteristic.

SOURCES: U.S. Department of Commerce and Council of Economic Advisers.

poor motivation. Other reasons include discrimination, low bargaining power, exclusion from minimum wage coverage, or lack of mobility resulting from inadequate knowledge of other opportunities or unwillingness or inability to move away from familiar surroundings.

The importance of education as a factor in poverty is suggested by the fact that families headed by persons with no more than 8 years of education have an incidence rate of 37 percent (table 2). Nonwhite and rural families show an even higher incidence of poverty. The heads of these families are typically less well educated than average.

*Property Income and Use of Savings.* Some families with inadequate current earnings can avoid poverty thanks to past savings, but most families with low earnings are not so fortunate. If avoiding poverty required an income supplement of \$1,500 a year for a retired man and his wife, they would need a capital sum at age 65 of about \$19,000 to provide such an annuity. Few families have that sum. The median net worth for all spending units (roughly equivalent to the total of families and unrelated individuals) was only \$4,700 in 1962. For all spending units whose head was 65 years or more, the median net worth was \$8,000. The median net worth of the fifth of all spending units having the lowest incomes was only \$1,000. Much of what property they have is in the form of dwellings. (About 40 percent of all poor families have some equity in a house.) Although this means that their housing costs are reduced, property in this form does not provide money income that can be used for other current expenses. Most families—including the aged—whose incomes are low

in any one year lack significant savings or property because their incomes have always been at poverty levels.

The persistence of poverty is reflected in the large number who have been unable to accumulate savings. [A University of Michigan] Survey Research Center study found that more than one-half of the aged poor in 1959 had less than \$500 in liquid savings (bank deposits and readily marketable securities), and they had not had savings above that figure during the previous 5 years. Less than one-fifth of all poor families reported accumulated savings in excess of \$500. The mean amount of savings used by poor families in 1959 was \$120; and only 23 percent of the poor drew on savings at all.

*Transfer Payments and Private Pensions.* Poverty would be more prevalent and more serious if many families and individuals did not receive transfer payments. In 1960, these payments (those which are not received in exchange for current services) constituted only 7 percent of total family income, but they comprised 43 percent of the total income of low-income spending units. At the same time, however, only about half of the present poor receive any transfer payments at all. And, of course, many persons who receive transfers through social insurance programs are not poor—often as a result of these benefits.

Transfer programs may be either public or private in nature and may or may not have involved past contributions by the recipient. Public transfer programs include social insurance—such as unemployment compensation, workmen's compensation, and old-age, survivors and disability insurance (OASDI); veterans benefits; and public assistance programs, such as old-age assistance (OAA) and aid to families with dependent children (AFDC).

Private transfer programs include organized systems, such as private pension plans and supplementary unemployment benefits, organized private charities, and private transfers within and among families.

It is important to distinguish between insurance-type programs and assistance programs, whether public or private. Assistance programs are ordinarily aimed specifically at the poor or the handicapped. Eligibility for their benefits may or may not be based upon current income; but neither eli-



gibility nor the size of benefits typically bears any direct relationship to past income. Eligibility for insurance-type programs, on the other hand, is based on past employment, and benefits on past earnings.

The Federal-State unemployment insurance system covers only about 77 percent of all paid employment and is intended to protect workers with a regular attachment to the labor force against temporary loss of income. Benefits, of course, are related to previous earnings.

While the largest transfer-payment program, OASDI, now covers approximately 90 percent of all paid employment, there are still several million aged persons who retired or whose husbands retired or died before acquiring coverage. Benefits are related to previous earnings, and the average benefit for a retired worker under this program at the end of 1963 was only \$77 a month, or \$924 a year. The average benefit for a retired worker and his wife if she is eligible for a wife's benefit is \$1,565 a year.

Public insurance-type transfer programs have made notable contributions to sustaining the incomes of those whose past earnings have been adequate [but they] are of least help to those whose earnings have never been adequate. Public assistance programs are an important support to low income and handicapped persons.

Private pensions, providing an annuity, are additional resources for some persons and families. In 1961, the beneficiaries of such plans numbered about 2 million (as against about 12 million receiving OASDI benefits), and total benefits paid were about \$2 billion. While the combination of OASDI and private pensions serves to protect some from poverty, most persons receiving OASDI receive no private pension supplement. In any case, benefits under private pension plans range widely, and since they are typically related to the individual's previous earnings, they are low when earnings have been low.

*The Vicious Circle.* Poverty breeds poverty. A poor individual or family has a high probability of staying poor. A recent sample study of AFDC recipients found that more than 40 percent of the parents were themselves raised in homes where public assistance had been received.

The Michigan study shows how inadequate education is perpetuated from generation to gen-

eration. Of the families identified as poor in that study, 64 percent were headed by a person who had had less than an eighth grade education. Of these, in turn, 67 percent had fathers who had also gone no further than eighth grade in school. Among the children of these poor families who had finished school, 34 percent had not gone beyond the eighth grade; this figure compares with 14 percent for all families. Fewer than 1 in 2 children of poor families had graduated from high school, compared with almost 2 out of 3 for all families.

A study of dropouts in New Haven, Conn., showed that 48 percent of children from lower class neighborhoods do not complete high school. The comparable figure for better neighborhoods was 22 percent.

Other studies indicate that unemployment rates are almost twice as high for dropouts as for high school graduates aged 16 to 24. Moreover, average incomes of male high school graduates are 25 percent higher than those of high school dropouts, and nearly 150 percent higher than those of men who completed less than 8 years of schooling.

There is a well-established association between school status and juvenile delinquency. For example, in the New Haven study cited, 48 percent of the dropouts, but only 18 percent of the high school graduates, had one or more arrests or referrals to juvenile court.

Low-income families lose more time from work, school, and other activities than their more fortunate fellow citizens. Persons in families with incomes under \$2,000 lost an average of 8 days of work in 1960-61, compared with 5.4 for all employed persons. They were restricted in activity for an average of 30 days (compared with 16.5 for the whole population) and badly disabled for 10.4 days (compared with 5.8 for the whole population).

*Recent Changes in the Pattern of Poverty.* In spite of tendencies for poverty to breed poverty, a smaller proportion of our adult population has been poor—and a smaller fraction of American children exposed to poverty—in each succeeding generation. But, at least since World War II, the speed of progress has not been equal for all types of families, as is shown in table 3.

The incidence of poverty has declined substantially for most categories shown in the table. But

there are some notable exceptions—families (1) with no earner, (2) with head not in the civilian labor force, (3) with head 65 years of age or older, (4) headed by a woman, and (5) on farms. It is also striking that in these classes, poverty is high as well as stubborn. Poverty continues high also among nonwhites, although there has been a large and welcome decline in this incidence. With

TABLE 3. NUMBER OF FAMILIES AND INCIDENCE OF POVERTY,<sup>1</sup> BY SELECTED FAMILY CHARACTERISTICS, 1947 AND 1962

Selected characteristic	Number of families			Incidence of poverty (percent) <sup>1</sup>		Per-centage change in number of poor families, 1947 to 1962
	1947	1962	Per-centage change, 1947 to 1962	1947	1962	
	Millions					
All families.....	37.3	47.0	26	32	20	-22
Earners in family:						
None.....	2.2	3.8	68	83	76	54
One.....	21.9	21.1	-4	35	20	-45
Two.....	9.9	17.0	73	20	10	-13
Three or more.....	3.3	5.1	56	10	8	29
Labor force status of head: <sup>2</sup>						
Not in civilian labor force.....	5.5	8.4	52	61	50	23
Unemployed.....	1.2	1.7	49	49	34	2
Employed.....	31.9	36.9	16	28	12	-48
Age of head:						
14 to 24 years.....	1.8	2.5	39	45	31	-6
25 to 54 years.....	25.0	30.4	22	27	13	-41
55 to 64 years.....	6.1	7.3	19	32	19	-28
65 years and over.....	4.4	6.8	54	57	47	27
Sex of head:						
Male.....	33.5	42.3	26	30	17	-30
Female.....	3.8	4.7	26	51	48	19
Color of family:						
White.....	34.2	42.4	24	29	17	-27
Nonwhite.....	3.1	4.6	46	67	44	-3
Children under 18 years of age in family:						
None.....	16.2	18.8	16	36	26	-16
One.....	8.9	8.7	-2	30	17	-46
Two.....	6.4	8.5	33	27	13	-33
Three or more.....	5.7	10.9	92	32	17	2
Regional location of family: <sup>3</sup>						
Northeast.....	10.1	11.5	14	26	14	-42
North Central.....	11.5	13.1	14	30	18	-31
South.....	11.5	13.5	17	49	32	-24
West.....	5.1	7.0	37	28	15	-26
Residence of family:						
Farm <sup>4</sup> .....	6.5	3.2	-51	56	43	-62
Nonfarm <sup>5</sup> .....	30.8	43.8	42	27	18	-5

<sup>1</sup> The incidence of poverty is measured by the percent that poor families with a given characteristic are of all families having the same characteristic.

<sup>2</sup> Labor force status is for April survey week of 1949 and March survey week of 1963. Income data (1962 prices) are for 1948 and 1962.

<sup>3</sup> Income data for 1949 and 1959. Since regional location data are from 1950 and 1960 Censuses, they are not strictly comparable with other data shown in this table, which are derived from *Current Population Reports*.

<sup>4</sup> The 1960 Census change in definition of a farm resulted in a decline of slightly over 1 million in the total number of farm families. Therefore, the incidence figures for 1947 and 1962 may not be strictly comparable.

<sup>5</sup> Since 1959, nonfarm data are not available separately for rural nonfarm and urban.

NOTE: Data relate to families and exclude unrelated individuals. Poverty is defined to include all families with total money income of less than \$3,000 (1962 prices); these are also referred to as poor families.

SOURCES: U.S. Department of Commerce and Council of Economic Advisers.

the sole exception of the farm group, the total number of *all* families in each of these categories has remained roughly the same or has increased. Hence the high-incidence groups, including the nonwhites, have come to constitute a larger *proportion* of the poor.

But the significance of these shifts in composition should not be exaggerated. About half of the poor families are still headed neither by an aged person nor by a woman, and 70 percent include at least one earner.

## Strategy Against Poverty

*Maintaining High Employment.* The maintenance of high employment—a labor market in which the demand for workers is strong relative to the supply—is a powerful force for the reduction of poverty. In a strong labor market, there are new and better opportunities for the unemployed, the partially employed, and the low paid. Employers have greater incentive to seek and train workers when their own markets are large and growing. For these reasons, tax reduction is the first requisite in 1964 of a concerted attack on poverty.

*Accelerating Economic Growth.* In the longer run, the advance of standards of living depends on the rate of growth of productivity per capita, and this in turn depends on science and technology, capital accumulation, and investments in human resources. Growth also expands the resources available to governments and private organizations to finance specific programs against poverty.

*Fighting Discrimination.* A program to end racial discrimination in America will open additional exits from poverty, and for a group with an incidence of poverty at least twice that for the Nation as a whole. The economic costs of discrimination to the total society are large. By discrimination in employment, the Nation denies itself the output of which the talents and training of the nonwhite population are already capable. But the basic case against discrimination is not economic. It is that discrimination affronts human dignity.

The Executive Branch has proposed comprehensive civil rights legislation that would help make it possible for all Americans to develop and use their capabilities. But it will have its full

effect only when all Americans join in dedicating themselves to the justice of this cause.

*Improving Regional Economies.* In a dynamic economy, whole regions lose their economic base when their natural resources are depleted or changes in taste and technology pass them by. State and regional programs, assisted by the Federal Government through the Area Redevelopment Administration [ARA], seek to restore in such regions a viable economic base suitable to their physical and human resources.

*Rehabilitating Urban and Rural Communities.* Eradication of slums can provide improved opportunities for their residents and enable them to contribute more to the community. Improved relocation programs are essential to avoid pushing the poor from an old slum to a new one. Improved community facilities and services, including day care centers for children of working mothers, are needed in low-income urban areas. Improvement of the physical environment, however, is not enough. Especially when newcomers to urban areas are involved, there need to be programs to facilitate adaptation to the new environments. The administration's proposed National Service Corps could aid and supplement local efforts to provide these and other urgently needed services.

Parallel programs for rehabilitation are needed in depressed rural areas. A healthy farm economy is basic to the strength of farm communities; and the Rural Area Development program and the ARA are of assistance in improving income and employment opportunities on and off the farm. Particular attention must be paid to the special problems of depressed nonfarm rural areas.

*Improving Labor Markets.* Improved employment information can help potential workers learn about and take advantage of new job opportunities, sometimes in different industries, occupations, and locations. A strengthened Federal-State employment service, better guidance and counseling services, development of a system for early warning of labor displacement resulting from technological change, assistance in worker relocation (as provided by the Trade Expansion Act and in the recent amendments to the Manpower Development and Training Act), increased amounts and duration of unemployment insurance benefits and

extension of its coverage—all these will enable more persons to maintain or increase their earnings.

*Expanding Educational Opportunities.* Too many young people are today condemned to grossly inadequate schools and instruction. Many communities lack resources for developing adequate schools or attracting teachers of high quality. Other communities concentrate their resources in the higher income areas, providing inadequate educational opportunities to those at the bottom of the economic ladder. The school must play a larger role in the development of poor youngsters if they are to have, in fact, "equal opportunity." This often means that schooling must start on a preschool basis and include a broad range of more intensive services. The President's program against poverty will propose project grants to strengthen educational services to children of the poor.

*Enlarging Job Opportunities for Youth.* Recent legislation for vocational education will help to improve the preparation of teenagers for productive employment. Improved counseling and employment services are needed for those leaving school. The administration's proposed Youth Employment Act will strengthen on-the-job training and public service employment programs and will establish a Youth Conservation Corps.

*Improving the Nation's Health.* Poverty is perpetuated by poor health, malnutrition, and chronic disabilities. New and expanded school health and school lunch programs will improve both health and education.

Legislation has recently been enacted to increase the supply of physicians and dentists and to expand mental health services. The poor have a special stake in our ongoing programs of medical research. Many aged persons are confronted by medical needs beyond their financial means. Passage of the program to provide hospital insurance for the aged under the social security system is an urgent immediate step.

*Promoting Adult Education and Training.* In an economy characterized by continual technological advance, many adults will not be able to earn incomes above the poverty line without new skills and training. The Manpower Training and Development Act and the training programs under the Area Redevelopment Act represent public rec-



ognition of this need. These and other programs to train and retrain workers must be expanded and strengthened, placing more emphasis on those with the greatest educational deficiencies.

*Assisting the Aged and Disabled.* Continued longrun improvement of social insurance benefits, along with expanded programs to cover hospital-related costs for the aged, and augmented construction of housing to meet the particular needs of the aged, are necessary steps in a continuing campaign against poverty.

*Organizing the Attack on Poverty.* No single program can embrace all who are poor, and no single program can strike at all the sources of today's and tomorrow's poverty. Diverse attacks are needed, but we must not lose sight of their common target—poverty. Many programs are directed against social problems which the poor share with the nonpoor. These are all to the good. But we must not let poor individuals and families get lost between these programs. Programs must be sufficiently coordinated that, whatever else they individually accomplish, they act together to lift the economic and social status of America's poor.

This coordinated attack must be adapted to local circumstances. Communities will be encouraged and helped to develop individual programs aimed at the special problems of their own poor families. Individual communities thus can participate in a nationwide action, research, and demonstration program, backed by the interest and resources of State and local governments and private organizations, and the coordinated efforts of Federal agencies working in such fields as education, health, housing, welfare, and agriculture.

Conquest of poverty is well within our power. About \$11 billion a year would bring all poor families up to the \$3,000 income level we have taken to be the minimum for a decent life. The majority of the Nation could simply tax themselves enough to provide the necessary income supplements to their less fortunate citizens. The burden would certainly not be intolerable. But this "solution" would leave untouched most of the roots of poverty. It will be far better, even if more difficult, to equip and to permit the poor of the Nation to produce and to earn the additional \$11 billion, and more. The major thrust of our campaign must be against causes rather than symptoms.

## A Case for Teachers' Unions

EDITOR'S NOTE.—*The following article is excerpted from a paper by George Brooks which appeared in the Report Card (New York State School of Industrial and Labor Relations, Cornell University). The paper presents a favorable viewpoint on the desirability of active union membership on the part of the teacher.*

I HAVE COME RELUCTANTLY to the conclusion that most teachers are not "naturally" union minded. Apparently thousands of teachers genuinely feel no need for a union, no expectation that it will ever be necessary, and therefore no reason for committing themselves to the more or less onerous responsibilities of union membership.

But I think it highly probable that there are other thousands who fail to join for reasons which cannot be so described, and which are, by any test, "illegitimate" reasons that are carefully planted and cultivated by "management." And while there are significant differences between mass-production workers and teachers, there are also very important similarities. For example, the argument that the union is an "outsider" which "intrudes" into the relation between the teacher and the administrator or supervisor is a true child of industrial antiunionism. This view assumes that there is an essential identity of interest within the entire school system, and that the working teacher has no special problem or interest independent of the general objectives of the school system. In this view, the union is unnecessarily divisive. If the union discovers conflict, it is only a conflict it has artificially created.

But this view flies in the face of facts. School boards and superintendents deal with complex problems. Their decisions may be more difficult than other employers, because their problems so often have political as well as financial and personnel dimensions. To assume that the interests of the teachers will always have priority or will even be carefully protected by the administrator is a patent absurdity. The special interests of the teacher need articulation and representation. And for this purpose, only a union is well designed. The National Education Association, by

the very nature of its structure and operation, obscures rather than defines the special problems and interests of teachers.

It seems more than likely that many teachers who do not join unions nevertheless recognize this need for representation. But to many of them, the game may not be worth the candle. It seems likely that most teachers, weighing the prospective gains and losses from union membership, incline toward the nonunion position for wholly understandable and practical reasons.

The disadvantages of joining, especially where the union has not been recognized, can be considerable. There are many hundreds of communities in which disapproval of the administration would be reflected immediately in one or more of the dozens of ways in which an administrator can make life better or worse for a teacher.

But the discouragement of unionism does not require overt antiunion expressions or actions. The desire to get ahead is probably as strong a motivation as the fear of overt discrimination. The desire to get ahead should not be derogated, of course, but when manipulated by petty tyrants, it can destroy human dignity.

Weighed against these disadvantages, the prospects of gain from union activity, in past years, must have seemed to many teachers remote and unlikely. It is therefore pleasant to be writing this in 1963 because we now have behind us the phenomenal successes of the last two negotiations of the United Federation of Teachers in New York (UFT). The American Federation of Teachers has a long and impressive record of accomplishments without which the UFT successes might never have occurred. But there has been a drama about the UFT organization and negotiations which has captured the imagination of teachers who had never been touched before by a realization of the possibilities of unionism.

It is impossible, after the UFT negotiations, to argue that teachers' unions "don't do anything for their members." It is almost equally difficult to argue that they represent any challenge to the integrity or competence of the school system. In more and more cases, the example set by the American Federation of Teachers in New York and other cities will seem like the natural recourse for teachers who want their interests made known when decisions affecting their livelihood are being reached.

## Labor Organizations in Asia and Australasia

A COMPARISON of the recently revised *Directory of Labor Organizations: Asia and Australasia*<sup>1</sup> with its 1958 predecessor reveals a pattern of overall trade union growth in the area, both in the number of union members and the number of unions reported. Although unions in some of the area's 55 countries and territories ceased to operate at some time during the 5-year period and, for various reasons, languished in other countries or were yet to be formed, in a great majority of the countries in which an organized labor movement existed in 1958, a substantial increase in trade union membership strength has been recorded.<sup>2</sup>

Unions in Asian and Australasian countries are often closely identified with political movements, frequently being organized as associates or arms of political parties. Additionally, over 70 percent of all union members in the region belong to unions that are affiliated with 1 of the 3 major international labor federations. Though all of these organizations have increased their membership in the region since 1958, their share of Asian and Australasian trade union membership has not kept pace with the overall regional growth of organized labor.

### International Labor Organizations

The International Confederation of Free Trade Unions reports an 18-percent membership increase in the area over 1958, but it now accounts for only 20 percent, rather than 22 percent, of all trade union members in this region. Forty-four percent of the ICFTU's Asian membership strength is found in nine countries in which more than half of all organized workers are in unions affiliated with the ICFTU. These nine countries showed 1958-63 membership changes ranging from a fourfold membership increase in Turkey to a 34 percent decrease in South Korea. In all nine, the great majority of union members belong to a large ICFTU-affiliated federation or center (though in Pakistan, 20 percent of trade unionists belong to a second federation, which was formerly affiliated with the Communist World Federation of Trade Unions, and 20 percent more belong to 24 independent unions and federations).

In these nine countries, the relationships of the unions to the political parties of their countries vary considerably. On one hand, the Malayan center asserts its political independence; on the other hand, the Australian center is closely associated with the Labor Party and so is the center in New Zealand, where union membership, with a few exceptions, is compulsory. Ninety-five percent of all trade union members in Aden are associated with the Aden Trade Union Congress, which was originally sponsored by the party in opposition. The ATUC is also the only federation in the area to belong to the ICFTU as well as to the Confederation of Arab Trade Unions, a regional organization having membership in Asia and Africa. In Israel, the three minor federations are politically oriented, as is the trade union department of Histadrut, which represents most of Israel's organized labor. In the ninth country, the Republic of China (Taiwan), the labor movement is subsidized by the government, which operates most industry.

The 18 autonomous International Trade Secretariats, which cooperate with the ICFTU, have increased their activity in Asia and Australasia substantially. In 1958, they had 80 affiliates in 11 countries; in 1963, they had 173 affiliates in 22 countries. Almost half are in the nine countries just discussed. The strongest International Trade Secretariat in the region is the International Transport Workers' Federation, with 45 affiliates in 16 countries; others active in the area include the International Federation of Petroleum Workers,<sup>3</sup> with 21 affiliates in 13 countries, and the Postal, Telegraph, and Telephone International, with 18 affiliates in 14 countries.

The trade departments of the WFTU have also increased their membership in non-Communist countries: in 1958, three trade departments had 4 affiliates in one country (Indonesia), while in 1963, four trade departments had 10 affiliates in four countries (Australia, India, Indonesia, and

<sup>1</sup> See the *Directory of Labor Organizations: Asia and Australasia* (Bureau of International Labor Affairs and Bureau of Labor Statistics, Rev. 1963).

<sup>2</sup> This discussion omits the 24 countries in the area where no trade unions exist, for which no information was available, or where the trade union movement is relatively small. For all of the countries covered, the *Directory* warns that membership data, though the best available, may be open to question.

<sup>3</sup> This federation changed its name to the International Federation of Petroleum and Chemical Workers after the *Directory* was published.



Japan). The WFTU itself has grown in Asia and Australasia by 28 percent, though it now represents a slightly smaller proportion of all union members in the area. Most of its membership increase came from the 24-percent increase in its Communist Chinese affiliate, which accounts for over 80 percent of its Asian membership; in Hong Kong, the only non-Communist country whose trade union membership is predominantly WFTU-oriented, union membership decreased by 24 percent over the 5-year period.

The largest of the two labor centers in Hong Kong is not affiliated with the WFTU, but, according to the *Directory*, follows its policies and programs. It accounts for over three-fifths of Hong Kong's trade union members; half of the remainder belong to independent unions, and half to a second center which was a founding member of the ICFTU.

The structure of the labor movement in Communist China, North Korea, Mongolia, and North Viet-Nam is relatively uniform: the single national center is an arm of the government, and its purpose is to implement government-party policy with regard to the working population.

The third major international labor organization, the International Federation of Christian Trade Unions (Confédération Internationale des Syndicats Chrétiens), has 60 percent of its Asian members in South Viet-Nam, the only country in the area whose labor movement is predominantly affiliated with this federation. Ninety percent of South Viet-Nam's unionists belong to the CISC-affiliated federation (two of this federation's major unions are affiliated with International Trade Secretariats); two small federations also exist in South Viet-Nam—one unaffiliated, and one an ICFTU member.

Two-thirds of the regionally organized Confederation of Arab Trade Unions' membership on the Asian continent is located in Jordan, which has experienced growth of almost 85 percent in union membership since 1958; its single federation, the CATU affiliate, claims three-fourths of Jordani union members.

### Structural Diversity

In the following nine countries, none of the international or regional federations can claim a majority of the labor movement: Singapore, the

Philippines, the Fiji Islands, the Ryukyu Islands, Japan, Lebanon, Ceylon, India, and Indonesia.

At present, there are no internationally affiliated groups in Singapore, where union membership has increased by 127 percent since 1958; one of the two Singapore centers is close to the governing People's Action Party, while the other is close to the antigovernment Barisan Socialist Party. In the Fiji Islands, the Philippines, and the Ryukyu Islands, the majority of trade unionists belong to unions that have no international affiliations, though the main Fiji federation is an ICFTU member, as is 1 of the 8 Filipino federations, and two unions affiliated with 1 of the 4 Ryukyuan federations.

The labor movement in Japan is split among four large confederations which comprise three-fourths of all trade union membership, and several independent unions which account for the remaining quarter, with industry councils cutting across federation lines. None of the confederations are affiliated internationally, but of the Domei Kaigi affiliates, Sodomei and all unions affiliated with Zenro are ICFTU affiliates. In addition, five Sohyo unions are ICFTU—and three are WFTU members; this confederation accounts for almost 50 percent of organized labor in Japan and is associated with the Socialist Party. The ICFTU-affiliated unions have formed a coordinating committee and account for 17 percent of all Japanese trade unionists (and one-fifth of all Asian ICFTU members); the WFTU-associated unions account for 7 percent. Japanese trade union membership grew by 40 percent between publication of the two directories.

In Lebanon, more than 60 percent of all organized workers belong to four non-Communist federations; two ICFTU affiliates, and two CATU affiliates, of which all but the smaller CATU-associated group are confederated. A fifth federation, not recognized by the Lebanese government, is a WFTU member. The Lebanese labor movement has expanded by almost 70 percent since 1958; its CATU affiliates now make up one-third of that federation's membership in the Near East.

The three most fragmented labor movements are in Ceylon, India, and Indonesia. Comprising almost 40 percent of Ceylonese trade union membership, an ICFTU-affiliated plantation workers' union is by far the largest single trade union organization in Ceylon. Among the five

labor federations in Ceylon, where trade union membership has increased by 177 percent since 1958, one is a WFTU affiliate and an arm of the Communist party, one is an arm of the Trotskyite party, one is an arm of the ruling party, one is an arm of yet a fourth party, and one is politically independent. The ICFTU affiliate is associated in a coordinating committee with the Trotskyite federation and the federation that supports the present government. The *Directory* estimates that there are 95 major independent unions in Ceylon, of which at least 25 lean toward the Trotskyite party, and 8 are, to some extent, dominated by Communists.

There are four labor centers in India, as well as strong independent unions in certain occupations. The largest center, the Indian National Trade Union Congress, which claims one-third of all unionists, is close to the ruling Congress party and is an ICFTU affiliate; Hind Mazdoor Sabha, the Socialist-oriented federation which claims 11 percent of all unionists, is also affiliated with the ICFTU. India, with 27 percent of the ICFTU's Asian membership, has more ICFTU members than any other single country in the region. Twenty percent of the labor movement belongs to the WFTU-associated center, and 4 percent to the Trotskyite-oriented federation. The CISC has recently acquired an affiliate in India, too.

The Indonesian labor movement, which has expanded by 110 percent, is far more fragmented than any other in the area; there are 13 active national centers and 43 independent unions, as well as a council of government unions. By far the largest federation is Communist and a WFTU

member; another is Trotskyite and also a WFTU member. Two small centers are anti-Communist and belong to the ICFTU; two others were at one time associated with Moslem parties, and two independent unions are CISC affiliates. According to the *Directory*, plural unionism is both tolerated and protected in Indonesia.

### Governmental Changes

In the remaining six countries, organized labor has undergone some sort of government-induced structural change. In Thailand, unions were abolished immediately following the 1958 coup d'état. After the 1962 coup in Burma, the government began to reorganize the labor movement into industrywide federations which are to be united under a central labor organization. The structure of the trade union movement in Iraq and in Syria has also been disrupted following successive government takeovers: in Iraq, the unions and the single center (which has severed its relations with the WFTU) are under temporary government management, and in Syria, the new regime is undertaking a complete restructuring of the trade union situation. Unions, including the ICFTU-affiliated federation, were dissolved in Iran but were permitted to form again as syndicates by meeting government registration requirements; and the government has also reorganized the labor groups in Nepal, where top union officials are now government appointed.

—MARTHA F. RICHE  
Division of Publications

## The Job Performance of Federal Mail Sorters by Age

A STUDY OF WORK PERFORMANCE of Federal mail sorters in mid-1961 confirmed earlier findings<sup>1</sup> that differences in output among workers at various age levels are largely insignificant, and that capability for superior performance abounds in all age groups.

This study, made by the Bureau of Labor Statistics at the request of the President's Council on Aging, also showed that the average performances of both older and younger age groups were within 4 percent of the base group's score.<sup>2</sup> Comparisons between individual cities included in the survey showed no age group to be consistently high or consistently low. Each group had above average scores in at least one-fourth of the cities surveyed.

These findings are important in any assessment of effective manpower use, since the displacement of workers by technological and other changes bears at least as heavily on older workers as on others. Many workers with long and satisfactory service records find themselves unemployed and too old to be hired while still too young to retire. By policy or practice, many firms refuse to hire these older workers, often citing among the reasons "inability to meet production standards."<sup>3</sup> Individual work performance, therefore, is an important factor considered in reemployment of displaced workers.

Another important factor that might be considered by employers is consistency of performance at

an acceptable production level. Many schedules depend on an even flow of work between departments and workers. In some types of operations, short spurts of production frequently make no contribution to efficiency of production, while unexpected substandard performance can create bottlenecks and partially halt subsequent operations.

These two questions—individual work performance and work consistency—received emphasis in the present study, which was based on records of actual production of about 6,000 workers over an 8-week period in 12 selected cities. (See table 1.) Most of the past studies in work performance have been based on opinion surveys and laboratory observations, and there have been few studies of consistency of performance.

### Scope, Method, and Limitations

The production records used in the survey were prepared by supervisors for administrative use

<sup>1</sup> The present is the third in a series of studies of workers' job performance by age group, made by the Bureau of Labor Statistics as part of its wider inquiry into the various problems faced by older workers. For the earlier studies, see "Measurement of Job Performance and Age," *Monthly Labor Review*, December 1956, pp. 1467-1471, and "Comparative Job Performance of Office Workers by Age," *Monthly Labor Review*, January 1960, pp. 39-43.

<sup>2</sup> The average output per man-hour of workers in the groups aged 35 to 44 years was used as a base and assigned a value of 100 for purposes of comparison.

The age groups discussed in this study are shown in table 1. The groups aged 60-64 and 65 and over were combined because data were insufficient to warrant separate presentation.

<sup>3</sup> Abraham Stahler, "The Older Worker—Job Problems and Their Solutions," *Monthly Labor Review*, January 1957, pp. 22-28; see also "The Older Worker," *Factory Management and Maintenance*, March 1958, pp. 85-96.

TABLE 1. INDEXES OF OUTPUT PER MAN-HOUR OF MAIL SORTERS, BY AGE GROUP, IN 12 SELECTED CITIES, MAY AND JUNE 1961

[Age group 35-44=100]

City	Age group								
	Under 25	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60 and over
All workers studied.....	101.2	100.1	101.3	100.1	99.8	99.5	100.9	99.1	96.2
Boston.....	100.7	95.7	98.2	98.3	102.3	99.3	101.7	98.1	94.0
Philadelphia.....	95.3	97.5	96.5	100.6	99.4	102.7	101.3	102.2	99.5
Rochester.....	97.7	97.9	100.4	101.3	99.2	100.9	107.4	98.7	104.5
Indianapolis.....	101.6	99.0	101.9	99.2	100.7	98.1	98.3	99.8	91.5
St. Louis.....	102.4	102.2	103.8	100.1	99.8	100.4	101.5	101.4	101.0
Cleveland.....	105.0	107.1	98.5	100.3	99.9	95.3	92.4	98.9	92.4
Port Worth.....	95.5	98.8	101.8	101.5	98.4	93.5	93.3	92.8	78.5
New Orleans.....	112.2	98.8	103.7	99.9	100.0	102.1	97.3	104.9	93.9
Atlanta.....	98.0	99.7	99.9	99.7	100.5	100.7	105.9	101.0	103.4
Phoenix.....	( <sup>1</sup> )	105.9	102.8	99.9	100.0	99.7	104.7	99.9	96.0
Denver.....	102.5	97.5	101.6	99.6	100.3	101.1	101.8	99.4	99.4
Los Angeles.....	100.3	99.6	103.9	102.0	97.9	100.4	104.1	96.2	94.0

<sup>1</sup> Too few workers to warrant presentation.



TABLE 2. INDEXES OF OUTPUT PER MAN-HOUR OF MAIL SORTERS, BY AGE GROUP, MEN AND WOMEN, FOR SELECTED CITIES, MAY AND JUNE 1961

[Age group 35-44=100]

Age group	All workers studied	Rochester, N.Y.	Indianapolis, Ind.	St. Louis, Mo.	Cleveland, Ohio	Fort Worth, Tex.	Denver, Colo.	Los Angeles, Calif.
Men								
Under 25.....	100.5	104.5	95.8	102.7	105.5	93.8	103.2	98.7
25-34.....	100.1	100.1	100.6	100.9	101.1	99.9	99.0	100.9
35-44.....	99.6	100.6	97.6	98.4	99.5	100.7	100.0	99.2
45-54.....	99.6	105.3	97.0	99.8	92.5	91.7	101.0	101.6
55 and over.....	97.0	104.2	92.6	99.8	91.7	89.0	98.6	93.8
Women								
Under 25.....	102.4	(1)	112.2	100.9	103.8	(1)	96.3	103.7
25-34.....	103.8	97.8	100.6	112.0	104.2	104.4	105.6	103.2
35-44.....	101.9	99.5	105.6	106.6	101.2	96.9	99.8	101.7
45-54.....	102.7	95.2	101.9	112.1	100.6	102.2	104.3	104.2
55 and over.....	101.1	(1)	109.7	112.0	104.0	(1)	104.9	98.5

<sup>1</sup> Too few workers to warrant presentation.

within the Post Office Department and covered May and June of 1961.<sup>4</sup> Age and length of service data were obtained from basic personnel records.

The records for each individual show the number of distribution (sorting) hours and the amount of production. Time standards are set for each sorting station, which vary according to the complexity of the task; employees must qualify on the specific sorting scheme of the stations of their assignment.

An index of performance was computed for each worker by dividing his production score by the average production score of all workers aged 35 to 44 (the basic group) doing similar work in the same city.

Data were not available for all cities in the United States, yet the choice of cities for the study could not be left entirely to chance. Twelve cities were included in the sample, selected to give broad geographic and city size representation. However, there was no reason to believe, either before or after the survey, that the size or location of the

city had any bearing on the comparisons of performance by age groups.<sup>5</sup>

Employees who spent very little time in sorting were eliminated from all tabulations, and those with less than 4 weeks of recorded measurement were eliminated from the tabulations of consistency.

Some employees were omitted from some tabulations because of incomplete data or obvious errors in reporting or processing. Consequently, the number of workers compared varies among the groups.

The composition of the youngest age group is not strictly comparable with that of succeeding age groups. The youngest group includes the ambitious and the superior as well as the less ambitious and the inept. Through the years, the character of the age group changes as the substandard are discharged and some of the superior are promoted. The oldest age groups of sorters, therefore, contain more of the acceptable workers with longer experience but fewer of the superior workers since these were selected for promotion or transfer to more attractive work. Data on the education level of the individual workers were not readily available and were not considered to be important in these comparisons.

In the earlier BLS studies, the results were heavily weighted by data for incentive workers and this was an important factor in evaluating the results. The lack of cash incentive payments for workers in this study increases its usefulness in evaluating performance when nonincentive employment is being considered.

<sup>4</sup> The Post Office Department discontinued its continuous measurement program in June 1961 and now measures production for only 1 week each month. The tabulations prepared from the records provide an objective yardstick for each employee to evaluate his own work, aid management in the selection of individuals and units for additional training, and furnish statistical data vital to the overall management and operation of the postal service.

<sup>5</sup> The index as computed for this study cannot be compared for relative efficiency between cities since they do not have a common standard. The mail sorting problems are unique to each city, not only in volume and complexity of sorting, but also in the physical characteristics of the mail due to varying industrial composition of cities and the efficiency of the individual Post Office facilities.

### Comparison Within Groups

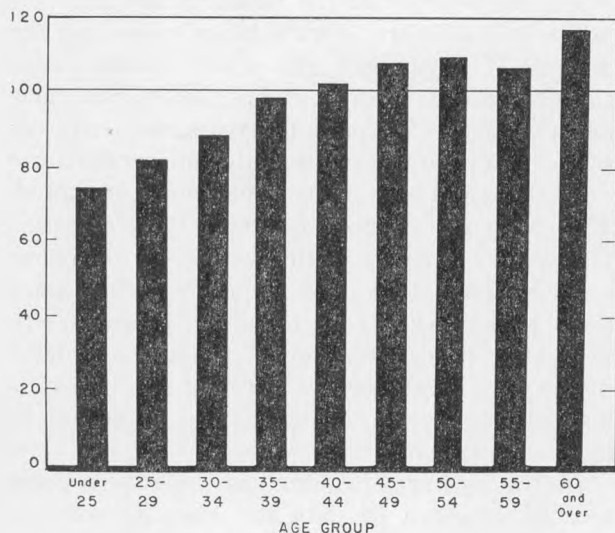
Comparisons of age groups within the individual cities did not reveal any distinct patterns of performance, except that the oldest age group (60 and over) had the lowest relative performance in half of the cities studied. They were, however, generally no more than 1 or 2 percent lower than the next lowest group. Since the relative score of the base group (ages 35 to 44) varied from city to city as compared to the average for all workers in the city, the index levels among cities were not entirely comparable.<sup>6</sup>

The age groups contained varying proportions of other characteristics which might affect the results. In order to evaluate the effect of some of these characteristics, comparisons were made by sex and length of service.

*Difference by Sex.* The great majority of workers included in the study were men. On the average, in the cities where there was a sufficient number of women to permit comparisons, women had a higher performance index than men. (See table 2.) The average score for men was lower than

### Consistency of Performance Indexes<sup>1</sup> of Mail Sorters, by Age Group, May and June 1961

[Age group 35-44=100]



<sup>1</sup> The consistency index for each individual was computed by comparing the average percent deviation from the worker's own average with the average deviation for the base group (35-44 years) in the same city over the entire period. The individual average deviations were combined to form average indexes for each age group. The reciprocals of these indexes were used as indexes of consistency.

TABLE 3. INDEXES OF OUTPUT PER MAN-HOUR OF MAIL SORTERS, BY SENIORITY GROUP, 12 SELECTED CITIES, MAY AND JUNE 1961

[Age group 35-44=100]

City	Seniority				
	6 months or less	7 months-3 years	4-9 years	10-14 years	15 years or more
All workers studied.....	91.3	99.0	101.2	101.0	99.4
Boston.....	94.9	97.2	99.7	99.8	99.3
Philadelphia.....	85.0	92.6	98.9	100.6	102.1
Rochester.....	89.7	96.3	103.1	103.5	108.2
Indianapolis.....	(1)	98.7	100.8	100.2	94.8
St. Louis.....	(1)	92.1	103.8	100.7	101.2
Cleveland.....	103.5	102.3	101.2	97.2	91.3
Fort Worth.....	77.9	98.2	101.4	99.8	90.2
New Orleans.....	94.2	102.1	101.3	99.7	102.3
Atlanta.....	96.5	95.4	100.7	101.8	102.5
Phoenix.....	86.7	107.8	100.3	100.8	98.7
Denver.....	90.5	99.0	101.4	103.2	104.2
Los Angeles.....	89.9	101.4	100.1	104.2	99.6

<sup>1</sup> Too few workers to warrant presentation.

that for women in 8 of the 10 cities where comparisons could be made, although the differences in most cases were too small to be meaningful. The average performance for all men studied was a little over 3 percent lower than that for all women included in the survey. The higher performance of women was found in each age group and the difference was greatest in the oldest age groups.

Average performance scores for women in individual cities varied less among age groups than did those for men. There were relatively few women in the older age groups, but the women's performance scores in those groups were above average in nearly all of the cities studied.

*Seniority.* The workers' length of service on the particular jobs studied was not readily available. As an alternative, overall service was used as an indication of experience since most of the workers' time had been spent as mail sorters.

Comparisons were made among groups of workers with 6 months' seniority or less, 7 months to 3 years, 4 to 9 years, 10 to 14 years, and 15 years and over. (See table 3.)

Workers with 6 months' seniority or less had the lowest average performance in all but two of the cities studied. This group averaged about 9 or 10 percent lower than the other groups with more experience. After 6 months, the length of experience seemed to be unimportant.

<sup>6</sup> This span was selected for the base group, instead of the average for all workers, in order to eliminate the effect of varying proportions of older or younger workers among the cities.

The earlier study of office workers also indicated that experience was one of the most important factors affecting performance. When the office workers with little experience were eliminated from the tabulations, all age groups had higher and almost identical average scores. In the present study, the elimination of workers with less than 7 months' service raised the performance index for all age groups except the oldest. The increases were small, the largest difference being in the youngest group where the performance index increased from 101.2 to 102.4.

### Individual Worker Variation

The great majority—typically, three-fourths—of the workers in each age group had performance scores within 15 percent of the base group score. (See table 4.) Relatively few of the workers in any age group had performance records as much as 25 percent below or above the average.

In the previous office worker study, concentration around the average was also very high and tended to increase in the higher age groups. In this study of mail sorters, the concentration around the average tended to be most pronounced among the middle-age groups. The lack of such concentration for the older age groups may be due to the physical requirements of the job which might strain the older workers with health problems.

The wider variation in performance among the youngest age group seemed to be partly correlated with experience on the job.

<sup>7</sup> For explanation of index construction, see footnote to the accompanying chart. Omitted from these tabulations were employees with fewer than four individual weekly measurements. Only 4 weekly records were available in Philadelphia and the data for that city are, therefore, not entirely comparable.

### Consistency of Performance

A significant finding of the BLS studies of work performance by age is the evidence of consistency in performance among older workers, first noted in the study of office workers. Various other factors, such as sex or length of service, often appeared to be more important than age in performance comparisons, but age and length of service both appeared to affect consistency of performance significantly.

In the current study, the trend toward increased consistency could be noted in each succeeding age group except for a slight dip for the 55 to 59 age group. Older workers, it was found, performed at a steadier rate, with less variation from week to week, than workers in the younger age groups, with the group age 60 and over being 60 percent more consistent than that under 25.<sup>7</sup> (See the accompanying chart.) This pattern appeared in each of the 12 cities studied, although the degree of consistency varied considerably among individual cities. The pattern was also evident among below average, average, and above average performers; it was present in each subgroup tabulation such as those by sex and length of service.

This constant growth of consistency throughout the life's working span may be attributable to increasing experience on the job, for long service employees also had a high degree of consistency. The index of consistency rose with each advancing seniority group, from 64.4 for those with 6 months' service or less to 113.8 for those with 15 years of service or more. In some situations, this steady growth of consistency with age may compensate for a possible slight decline in productivity rates of older workers.

TABLE 4. INDEXES OF OUTPUT PER MAN-HOUR OF MAIL SORTERS, BY AGE GROUP, ALL WORKERS STUDIED, MAY AND JUNE 1961

[Age group 35-44=100]

Age group	Number of workers	Average index	Percentage distribution of workers with indexes of—						
			Under 75	75-84.9	85-94.9	95-104.9	105-114.9	115-124.9	125 and over
Under 25.....	405	101.2	3	10	22	32	18	10	4
25-29.....	696	100.1	3	8	24	33	19	8	4
30-34.....	803	101.3	2	7	24	34	20	7	5
35-39.....	924	100.1	2	6	27	34	21	7	3
40-44.....	922	99.8	2	7	25	35	20	6	4
45-49.....	718	99.5	2	8	23	38	18	7	3
50-54.....	467	100.9	3	9	20	37	20	8	4
55-59.....	224	99.1	4	10	26	28	17	8	7
60 and over.....	178	96.2	6	8	26	33	14	10	3



Men, on the average, had a higher consistency record than women, but this relationship within individual cities was variable and inconclusive.

## Conclusions

A comparison of the three studies made so far by the Bureau indicates that where physical effort is required, such as in the factory work, there is a slight decrease in productivity in advancing age groups after age 45 and that this decrease becomes substantial after age 65.

In more sedentary work (such as office work) and in occupations with limited physical requirements (such as mail sorting), there is little, if any, decline in performance to age 60 and only a minor

decline to age 65. In the previous office worker study, the oldest age group—65 and over—actually had the highest performance record. Among mail sorters there was a decline in production in the age group 65 and over. The averages for the two groups of 60 to 64 and 65 and over were 97.4 and 93.3, respectively.

The proportion of workers in all age groups that performed above the average indicates the need for individual evaluation of workers. High consistency of performance among older age groups may be an important factor for employers to consider in hiring for operations requiring a constant flow of work.

—JAMES F. WALKER

Division of Productivity Measurement

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Whereas the principle of equal employment opportunity is now an established policy of our Government and applies equally to all who wish to work and are capable of doing so and; . . .

Whereas, to encourage and hasten the acceptance of the principle of equal employment opportunity for older persons by all sectors of the economy, private and public, the Federal Government can and should provide maximum leadership in this regard by adopting that principle as an express policy of the Federal Government not only with respect to Federal employees but also with respect to persons employed by contractors and subcontractors engaged in the performance of Federal contracts;

Now, therefore, I hereby declare that it is the policy of the Executive Branch of the Government that (1) contractors and subcontractors engaged in the performance of Federal contracts shall not, in connection with the employment, advancement, or discharge of employees, or in connection with the terms, conditions, or privileges of their employment, discriminate against persons because of their age except upon the basis of a bona fide occupational qualification, retirement plan, or statutory requirement, and (2) that contractors and subcontractors, or persons acting on their behalf, shall not specify, in solicitations or advertisements for employees to work on Government contracts, a maximum age limit for such employment unless the specified maximum age limit is based upon a bona fide occupational qualification, retirement plan, or statutory requirement. The head of each department and agency shall take appropriate action to enunciate this policy, and to this end the Federal Procurement [Regulations and the Armed Services Procurement] Regulation shall be amended by the insertion therein of a statement giving continuous notice of the existence of the policy declared by this order.

—Executive Order 11141 signed by President Lyndon B. Johnson, February 12, 1964.

## White-Collar Salaries in Hawaii, Puerto Rico, and Alaska

DURING MAY AND JUNE 1963, the Bureau of Labor Statistics conducted surveys of salaries for selected white-collar occupations in urban areas of Hawaii, Puerto Rico, and Alaska. The surveys were conducted upon request of the Bureau of the Budget and the Civil Service Commission in connection with their Federal salary responsibilities. In addition to salary data for these white-collar occupations, the studies also obtained information on such supplementary wage benefits as vacation, holiday, and insurance provisions applying to nonsupervisory office workers.

To provide a basis for comparing rates of pay in each of the locations with national levels, the surveys were patterned on the Bureau's annual nationwide survey of white-collar salaries.<sup>1</sup> Although the full list of 77 occupation work levels, as defined for the nationwide survey, was used in these studies, the number of levels in which employment was sufficient to warrant publication varied among the areas. In this article, only those occupation work levels are presented which had sufficient employment in at least 2 of the 3 areas to permit publication in the Bureau's report.<sup>2</sup>

### Scope of Surveys

These surveys included establishments employing 50 workers or more situated in Standard Metropolitan Statistical Areas of Hawaii and Puerto Rico and in cities and contiguous areas of Anchorage, Fairbanks, Juneau, and Ketchikan, plus a few relatively large establishments in other communities of Alaska. Major industry groups excluded were government operations and extractive industries. The areas selected for study represented approximately 80 percent of the population in Hawaii, 35 percent in Puerto Rico, and 30 percent in Alaska. Although total employment in the industries within the scope of these surveys was highest in the combined areas surveyed in Puerto Rico, the Honolulu metropolitan area ranked first in employment of white-collar workers (18,500 compared with 15,600 and 2,770, respectively, in areas surveyed in Puerto Rico and Alaska). In each area, more than three-fifths of the white-collar

workers were employed in three major industry divisions: Manufacturing; transportation, communication, and other public utilities; and finance, insurance, and real estate. The finance industries accounted for a fourth of the white-collar workers in Honolulu and Puerto Rico areas and for almost a fifth in the Alaska areas. Manufacturing industries accounted for a somewhat larger proportion of the white-collar workers in the Puerto Rico areas than in Honolulu and the Alaska areas, and the types of manufacturing industries also differed among these areas. In Honolulu, the leading manufacturing industries were raw sugar processing, pineapple canning, printing and publishing, and apparel. In the Puerto Rico areas, apparel was also an important manufacturing industry, as were food and related products, electrical machinery and equipment, furniture and fixtures, and concrete and glass products. The manufacturing industries represented in the Alaska study were mainly pulp and lumber mills, fish canneries, and manufacturers of concrete products.

Specific job functions and responsibilities determining classifications and the number of work levels selected for study varied from occupation to occupation. With the assistance of employers, field economists of the Bureau of Labor Statistics classified employees according to occupation work levels only if they met the criteria as specified in the survey definitions.<sup>3</sup> Therefore, the employment and salary data presented relate only to these employees. Data for a number of the work levels could not be presented because employment was too small to provide enough data or because there was a possibility of disclosing individual establishment data.

### Average Monthly Salaries

Average (mean) monthly salaries for accountants are presented in table 1 for four levels of responsibility in Honolulu and Puerto Rico areas and for three levels in Alaska areas. Account-

<sup>1</sup> See *National Survey of Professional, Administrative, Technical, and Clerical Pay, February-March 1963* (BLS Bulletin 1387, 1963); see also "1963 Survey of White-Collar Salaries," *Monthly Labor Review*, November 1963, pp. 1283-1289.

<sup>2</sup> See *Salaries of White-Collar Workers in Hawaii, Puerto Rico, and Alaska, May-June 1963* (BLS Bulletin 1392, 1963).

<sup>3</sup> The job definitions are available upon request to the Bureau of Labor Statistics. They also appear in appendix B of BLS Bulletins 1387 and 1392, op. cit.

TABLE 1. EMPLOYMENT AND AVERAGE MONTHLY SALARIES<sup>1</sup> FOR SELECTED WHITE-COLLAR OCCUPATIONS IN URBAN AREAS OF HAWAII, PUERTO RICO, AND ALASKA, MAY AND JUNE 1963

Occupation and class	Honolulu, Hawaii, May 1963		Mayagüez, Ponce, and San Juan, Puerto Rico, May 1963		Anchorage, Fairbanks, Juneau, and Ketchikan, Alaska, June 1963	
	Number of employees	Average salary <sup>1</sup>	Number of employees	Average salary <sup>1</sup>	Number of employees	Average salary <sup>1</sup>
<b>ACCOUNTANTS</b>						
Accountants II.....	24	\$515	55	\$361	(2)	(2)
Accountants III.....	64	650	96	454	8	\$806
Accountants IV.....	30	797	74	532	7	953
Chief accountants II.....	31	823	19	728	4	1,120
<b>ENGINEERS</b>						
Engineers II.....	34	677	28	469	(2)	(2)
Engineers III.....	103	681	70	593	(2)	(2)
Engineers IV.....	65	829	141	705	(2)	(2)
Engineers V.....	80	1,034	44	800	16	1,246
Engineers VI.....	21	1,221	10	978	(2)	(2)
<b>DRAFTSMEN</b>						
Draftsmen, senior.....	65	537	32	349	(2)	(2)
<b>CLERICAL</b>						
Bookkeeping-machine operators I.....	132	299	284	239	43	374
Bookkeeping-machine operators II.....	72	360	68	298	17	499
Clerks, accounting I.....	356	311	250	243	66	426
Clerks, accounting II.....	237	435	283	287	54	537
Clerks, file I.....	72	241	50	214	15	355
Clerks, file II.....	29	275	65	232	8	387
Keypunch operators I.....	122	305	116	221	(2)	(2)
Office boys or girls.....	102	255	130	211	9	377
Stenographers, general.....	197	330	280	249	14	449
Stenographers, senior.....	210	384	66	279	31	489
Switchboard operators.....	130	316	93	211	21	405
Tabulating-machine operators I.....	87	426	43	289	7	492
Typists I.....	194	264	360	215	22	377
Typists II.....	87	348	101	244	37	440

<sup>1</sup> Average straight-time monthly salaries corresponding to the employees' normal work schedules, excluding overtime.

<sup>2</sup> Insufficient employment to warrant presentation of data.

ants II, representing the next level of work above entry positions for inexperienced college graduates, averaged \$515 in Honolulu and \$361 in Puerto Rico areas. Accountants IV, those who generally work with considerable independence and are fully competent to solve a variety of difficult accounting problems, were paid an average of \$797 a month in Honolulu, \$532 in Puerto Rico areas, and \$953 in Alaska areas. Chief accountants II averaged \$823 in Honolulu, \$728 in Puerto Rico areas, and \$1,120 in Alaska areas.

Engineers in Honolulu were paid monthly salaries averaging \$677 for level II and \$1,221 for level VI. For these two levels in Puerto Rico areas, the average salaries were \$469 and \$978. Engineers II represent the next level above entry positions for college graduates, whereas engineers

VI are those who typically direct a small staff of project engineers and have full technical responsibility for planning and directing a number of large and important projects or a project of major scope and importance. Engineers V, the only level for which comparisons could be made in all areas, were paid monthly salaries averaging \$1,034 in Honolulu, \$800 in Puerto Rico areas, and \$1,246 in Alaska areas.

Large proportions of the engineers in all of these areas were employed in construction. This industry accounted for approximately half of the engineers in the Puerto Rico and Alaska areas and one-third of those in Honolulu.

Among 14 job categories in the clerical field, average monthly salaries in Honolulu ranged from \$241 for file clerks I, performing simple filing, to \$435 for accounting clerks II, a level defined to include workers responsible for maintaining one or more sections of a complete set of books. In Alaska areas, the averages for the corresponding jobs were \$355 and \$537, respectively; these averages also represented the range of the distribution. Salaries for clerical jobs in Puerto Rico fell within a more narrow range from \$211 for switchboard operators and office boys or girls to \$298 for bookkeeping-machine operators II. General stenographers averaged \$330 in Honolulu, \$249 in Puerto Rico areas, and \$449 in Alaska areas.

Within most of the occupation work levels studied in these areas, salaries of the highest paid employees were typically at least 1½ times the salaries of the lowest paid employees in the same level. There was also marked overlapping of salaries between work levels of the same occupation and between occupations with substantially different average salaries. The ranges in salaries paid individuals in the same job category reflect salary differences among as well as within establishments. Differences in pay for the same job category within an establishment may be accounted for by differences in ability, experience, or performance, as determined informally on an individual basis or as provided for under formal salary plans with established salary ranges for each grade level.

### Nationwide Comparisons

Average salaries for the occupation work levels studied in Honolulu were generally slightly below



the averages for corresponding levels in all metropolitan areas of the United States combined. For the 24 work levels presented in table 2, average

TABLE 2. PERCENT OF NONSUPERVISORY OFFICE WORKERS EMPLOYED IN ESTABLISHMENTS WITH FORMAL PROVISIONS FOR SELECTED SUPPLEMENTARY WAGE BENEFITS,<sup>1</sup> URBAN AREAS OF HAWAII, PUERTO RICO, AND ALASKA, MAY AND JUNE 1963

Selected benefits <sup>1</sup>	Honolulu, Hawaii, May 1963	Mayagüez, Ponce, and San Juan, Puerto Rico, May 1963	Anchorage, Fairbanks, Juneau, and Ketchikan, Alaska, June 1963
<b>PAID HOLIDAY TIME <sup>2</sup></b>			
20 days.....		(3)	
18 days or more.....		27	
15 days or more.....		28	
14 days or more.....		32	
13 days or more.....		59	
12 days or more.....	12	77	
11 days or more.....	27	79	35
10 days or more.....	36	84	35
9 days or more.....	58	87	39
8 days or more.....	82	90	68
7 days or more.....	97	94	90
6 days or more.....	99	96	97
Total receiving paid holidays.....	99	99	98
Average number of paid holiday days.....	9.2	13.2	8.7
<b>PAID VACATIONS <sup>4</sup></b>			
2 weeks or more.....	99	99	97
After 1 year of service.....	85	97	93
After 2 years of service.....	99	98	95
After 3 years of service.....	99	98	96
After 5 years of service.....	99	99	97
3 weeks or more.....	86	80	67
After 1 year of service.....	19	50	2
After 3 years of service.....	37	57	4
After 4 years of service.....	37	60	11
After 5 years of service.....	56	74	20
After 10 years of service.....	75	80	65
After 15 years of service.....	85	80	67
4 weeks or more.....	45	32	44
After 5 years of service.....		6	3
After 10 years of service.....		16	9
After 15 years of service.....	1	20	21
After 20 years of service.....	37	23	26
After 25 years of service.....	45	32	44
<b>HEALTH, INSURANCE, AND PENSION PLANS <sup>5</sup></b>			
Life insurance.....	93	80	76
Accidental death and dismemberment insurance.....	63	46	66
Hospitalization insurance.....	95	87	90
Surgical insurance.....	95	86	90
Medical insurance.....	95	82	89
Catastrophe insurance.....	82	25	83
Sickness pay <sup>6</sup> .....	90	71	89
Retirement pension.....	74	35	45

<sup>1</sup> If formal provisions for supplementary benefits in an establishment were applicable to half or more of the nonsupervisory office workers, the benefits were considered applicable to all workers. Because of length-of-service and other eligibility requirements, the proportion of workers to whom the benefits currently apply may be smaller than estimated.

<sup>2</sup> All combinations of full and half days that add to the same amount are combined. For example, the proportion of workers receiving 7 days includes those with 7 full days and no half days, 6 full days and 2 half days, 5 full days and 4 half days, etc. Proportions were then cumulated.

<sup>3</sup> Less than 0.5 percent.

<sup>4</sup> Includes percentage or flat-sum type payments converted to equivalent weeks of pay. Periods of service were arbitrarily chosen and do not necessarily reflect the individual provisions for progression. For example, the changes in proportions indicated at 10 years of service include changes in provisions occurring between 5 and 10 years. Estimates are cumulative. Thus, the proportion receiving 3 weeks' pay or more after 5 years includes those who receive 3 weeks' pay or more after fewer years of service.

<sup>5</sup> Includes only those plans for which at least part of the cost is borne by the employer and excludes legally required plans such as workmen's compensation and social security.

<sup>6</sup> Sickness and accident insurance, sick leave, or both.

monthly salaries in Honolulu were below the national averages in 17 levels and slightly above in 7. In the professional occupations, average salaries in Honolulu were slightly above national averages in two levels for both accountants and engineers, but were below national averages for the other two levels of accountants and three levels of engineers. Among the 14 clerical jobs shown for Honolulu, monthly salaries in 11 were below national salary levels. A majority of the clerical occupations averaged from \$10 to \$27 a month less than national averages. In comparison with Honolulu, salary levels were distinctly higher in the Alaska areas studied, but were well below Honolulu levels in the Puerto Rico areas.

### Salary Differentials

The salaries presented include special differentials paid to employees in Hawaii and Alaska by companies with headquarters in other States. None of the employees in the occupations studied in Puerto Rico were paid such differentials. In Honolulu, four establishments with headquarters in other States, representing approximately a fifth of such establishments studied, paid differentials ranging from about 10 to 25 percent. In most instances, these differentials applied to employees transferred to Hawaii from the mainland, and in 3 of the 4 establishments, they applied only to employees in professional, administrative, or technical positions. In Alaska, special differentials were paid to employees in the jobs studied in 17 of approximately 30 establishments whose headquarters were known to be located in other States. In some cases, the salary differentials were specified sums of money, and in others they were specified percentages above salaries paid outside of Alaska. Airlines servicing Alaska, for example, typically paid differentials ranging from \$75 to \$194 per month. Companies maintaining defense communications facilities, oil companies, and construction companies usually paid percentage differentials—varying from 25 to 45 percent—above salaries paid in other States.

### Weekly Hours

The length of the workweek upon which the regular straight-time salary was based was obtained for employees in each occupation. These

average weekly hours (rounded to the nearest half hour) varied somewhat among occupations from 38 to 40 hours in Honolulu, from 38 to 41 in Puerto Rico areas, and from 39½ to 46 in Alaska areas. Differences in the average weekly hours for the occupations in each area reflect variations in the distribution of employees among industries in which salaries were based on workweeks other than 40 hours.

Additional information was gathered concerning the number of weekly hours a majority of office workers were scheduled to work during the period studied. The scheduled workweek was 40 hours in establishments employing four-fifths of these workers in Honolulu, about two-thirds in Puerto Rico areas, and nine-tenths in Alaska areas. Most of the others in Honolulu and Puerto Rico were on shorter schedules, usually between 35 and 38 hours; in Alaska, a majority of the others were on longer schedules ranging from 42 to 54 hours a week. Office workers scheduled to work fewer than 40 hours were primarily employed in finance industries in each area, and those scheduled to work more than 40 hours in Alaska were employed mainly in construction and defense communications outposts.

### Supplementary Wage Benefits

The data presented in table 2 on selected supplementary wage benefits relate to provisions for non-supervisory office workers, although others in higher level positions may receive the same benefits. Each provision was tabulated as applying to all office workers in an establishment if a majority were or could eventually become eligible.

In each of the three areas, paid holidays were provided for nearly all office workers. The number of annual paid holidays varied within as well as among the areas. Including half days, the average holiday time amounted to 9.2 days in Honolulu, 13.2 days in Puerto Rico areas, and 8.7 days in Alaska areas. The larger amount of holiday time for Puerto Rican workers reflects the com-

mon practice of providing either a full or half day on 18 national and religious holidays. For example, 27 percent of the office workers received 18 full days, 17 percent received 8 full plus 10 half days, and 13 percent received 7 full plus 11 half days. Banks accounted for a high proportion of the office workers receiving the most days in each area.

Paid vacations after qualifying periods of service were provided in virtually all establishments in these areas. Most office workers were entitled to at least 2 weeks with pay after a year of service. In establishments employing a majority of the office workers, 3 weeks or more were given after service of 5 years or less in Honolulu and after 10 years or less in Alaska areas. In Puerto Rico areas, establishments employing half the office workers provided at least 3 weeks after a year of service. Paid vacations of 4 weeks or more applied to a higher proportion of office workers in Honolulu and Alaska areas than in Puerto Rico areas.

Of the health, insurance, and pension benefits (other than legally required plans) available to office workers for which the employer paid at least part of the cost, the most common in each area were hospitalization, surgical, and medical insurance. Catastrophe insurance, or extended medical coverage, was available in establishments with more than four-fifths of the office workers in Honolulu and Alaska areas, but only in establishments with a fourth of these workers in Puerto Rico areas. Provisions for supplementary retirement pensions applied in establishments with 74 percent of the office workers in Honolulu, 35 percent in Puerto Rico areas, and 45 percent in Alaska areas.

Nonproduction bonuses—cash payments usually provided at Christmas or yearend to all or a majority of the office workers—applied in establishments employing two-fifths of these workers in Honolulu and Alaska areas and three-fourths in Puerto Rico areas.

—BOYD B. O'NEAL  
Division of Occupational Pay

## Pay Supplements in Finance, Insurance, and Real Estate<sup>1</sup>

IN 1961, employers in the Nation's finance, insurance, and real estate industries had expenditures for paid leave amounting to 7.8 percent of the gross payroll for all employees (excluding nonoffice salesmen); their expenditures for premium pay (for overtime, weekend, holiday, and late-shift work) and for Christmas, yearend, and other irregular bonuses were 0.7 and 3.5 percent, respectively. In addition, employers made payments in an amount equal to 3.6 percent of gross payroll for legally required insurance programs and 6.9 percent for selected types of private welfare plans.

### Scope and Method

The expenditure estimates presented in this article relate to selected practices involving employer payments directly to employees or to insurance companies, government, or private welfare funds. These practices (itemized in table 1) are believed to constitute the major elements of supplementary employee remuneration in the three industries as a whole. Employee remuneration, including supplements, does not constitute a measure of total labor costs since the latter includes such items as costs of recruitment, training, and in-plant medical care and other facilities.

Unlike previous reports published by the Bureau of Labor Statistics in this series,<sup>1</sup> the present study provides data for supervisory as well as nonsupervisory employees in all classes of work. The industries studied here are largely staffed with employees performing office functions.

The survey related to all establishments in the Nation's finance, insurance, and real estate industries as defined by the 1957 edition of the *Standard Industrial Classification Manual*, prepared by the Bureau of the Budget. A sample was selected in accordance with industry, location, and size characteristics, and the data were received—principally by mail—from approximately 1,450 units with a total of almost half a million employees (excluding nonoffice salesmen). Data for each reporting unit were weighted in accordance with its probability of selection, and then adjusted

to employment data for 1961 as reported in the BLS monthly employment, hours, and earnings series.

Among the data collected in the survey were the establishment's gross payroll, its expenditures for the supplementary remuneration items studied, the total man-hours paid for, and the man-hours related to each of the leave expenditures. Expenditures were tabulated as a percent of gross payroll and of straight-time payroll (gross payroll minus premium pay for overtime, weekend, holiday, and late-shift work), as cents per hour paid for, and as cents per plant hour (hours paid for less paid leave hours). For each measure, ratios were separately computed for all establishments and for those with expenditures for a given practice. The former ratio can be related to published wage data, and the latter shows the average expenditure in establishments actually making expenditures for the practice. Except for instances in which all establishments have expenditures for the practice, the ratio for all establishments will be lower than that for establishments with expenditures for the practice, the extent of the difference depending upon the prevalence of such expenditures for the practice.

### Paid Leave

Paid leave expenditures<sup>2</sup> represented mainly vacation and holiday pay, the former amounting to 3.8 percent of the gross payroll for all employees (excluding nonoffice salesmen) and the latter, to 2.7 percent (table 2). A total of 98.5 percent of the employees were in establishments with the expenditures for paid leave.<sup>3</sup> Sick pay accounted

<sup>1</sup> *Employer Expenditures for Selected Supplementary Remuneration Practices for Production Workers in Manufacturing Industries, 1959* (BLS Bulletin 1308, 1962); and under this title for *Mining Industries, 1960* (BLS Bulletin 1332, 1963). Before their publication, both reports were summarized in the *Monthly Labor Review* issues for January 1962, pp. 30-37, and June 1962, pp. 654-661, respectively. A more comprehensive report on the present study will be presented in a forthcoming BLS bulletin.

<sup>2</sup> For purposes of this study, paid leave expenditures included only the payments made by the company directly to the employees; employer payments to vacation and holiday funds, which in these industries are negligible, were treated separately under private welfare plans. Similarly, company payments to insurance carriers or special funds, which pay health and sickness benefits to workers, were classified as payments to private welfare plans rather than as paid sick leave. In the few States where temporary disability insurance is required by law, company payments made directly to the worker under self-insurance provisions of the law were considered legally required payments rather than sick leave.

<sup>3</sup> It does not follow that all employees in an establishment with expenditures for a given salary supplement necessarily received that supplement.



for 1.1 percent, and military, jury, witness, voting, and personal leave for 0.2 percent. Since expenditures for paid leave were quite common in the establishments surveyed, expenditure ratios frequently were not substantially higher for establishments with expenditures than for all establishments. This was particularly true for vacations and holidays.

For the three industries as a whole, on a percent-of-gross-payroll basis, the major differences between supervisory and nonsupervisory employees were found in vacations and sick leave. Vacation expenditures were higher for supervisors, while sick leave expenditures were higher for non-supervisory workers.

Substantial variations in expenditure ratios existed among the industry groups studied individually. In percentages of gross payroll, total paid leave expenditures ranged from a high of 9.1 percent in insurance carriers to a low of 5.8 percent in real estate.

In cents per hour paid for, total expenditures for paid leave in all establishments amounted to

20.3 cents, consisting of 9.9 cents for vacations, 7.1 cents for holidays, 2.9 cents for sick leave, and 0.5 cent for other paid leave. Partly reflecting differences in salary levels, the comparable figures were much higher for supervisory than for non-supervisory employees. For all establishments, the security and commodity brokers, dealers, exchanges, and services group had the highest cents-per-hour-paid-for expenditure for total paid leave of any of the industry groups studied separately—24.9 cents for all employees, 52.3 cents for supervisory employees, and 20.1 cents for nonsupervisory workers.

### Premium Pay

The three industries' total premium pay<sup>4</sup> expenditures, amounting to 0.7 percent of the gross payroll, were almost exclusively for daily and weekly overtime and weekend and holiday work; premiums for work on late shifts were negligible

<sup>4</sup> Premium pay covers the extra pay for overtime, weekend, holiday, or late-shift work but not the straight-time pay.

TABLE 1. AVERAGE EXPENDITURES OF EMPLOYERS FOR SELECTED SUPPLEMENTARY EMPLOYEE REMUNERATION PRACTICES IN FINANCE, INSURANCE, AND REAL ESTATE INDUSTRIES, BY EMPLOYEE GROUP,<sup>1</sup> 1961

Practice	All employees				Supervisory employees				Nonsupervisory employees			
	Percent of gross payroll	Percent of straight-time payroll	Cents per hour paid for	Cents per plant man-hour	Percent of gross payroll	Percent of straight-time payroll	Cents per hour paid for	Cents per plant man-hour	Percent of gross payroll	Percent of straight-time payroll	Cents per hour paid for	Cents per plant man-hour
Paid leave.....	7.8	7.9	20.3	22.1	8.0	8.1	40.4	44.0	7.7	7.8	15.7	17.0
Vacations.....	3.8	3.8	9.9	10.7	4.4	4.4	21.9	23.8	3.5	3.5	7.1	7.7
Holidays.....	2.7	2.8	7.1	7.7	2.7	2.7	13.4	14.6	2.8	2.8	5.6	6.1
Sick leave.....	1.1	1.1	2.9	3.1	.9	.9	4.3	4.7	1.2	1.3	2.5	2.8
Military, jury, witness, voting, and personal leave.....	.2	.2	.5	.5	.2	.2	.8	.8	.2	.2	.4	.4
Premium pay.....	.7	.7	1.8	1.9	.1	.1	.4	.5	1.0	1.0	2.1	2.2
Daily overtime, weekly overtime, and weekend and holiday work premiums.....	.7	.7	1.7	1.8	.1	.1	.4	.4	1.0	1.0	2.0	2.2
Shift differentials.....	(2)	(2)	.1	.1	(2)	(2)	(2)	(2)	(2)	(2)	.1	.1
Christmas, yearend, and other irregular bonuses.....	3.5	3.5	9.0	9.8	5.4	5.4	27.0	29.5	2.6	2.6	5.3	5.8
Legally required insurance payments.....	3.6	3.6	9.4	10.2	2.2	2.2	11.0	12.0	4.4	4.5	9.0	9.7
Old-age, survivors, and disability insurance.....	2.2	2.3	5.8	6.3	1.4	1.4	7.2	7.8	2.7	2.7	5.4	5.9
Unemployment compensation.....	1.1	1.1	2.8	3.0	.6	.6	2.9	3.2	1.4	1.4	2.8	3.0
Workmen's compensation.....	.2	.3	.6	.7	.1	.1	.7	.8	.3	.3	.6	.7
Other, including temporary disability insurance.....	.1	.1	.1	.2	(2)	(2)	.1	.2	.1	.1	.1	.2
Private welfare plans <sup>2</sup> .....	6.9	7.0	17.9	19.5	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)
Health, accident, and life insurance.....	1.9	1.9	4.9	5.3	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)
Pension and retirement plans.....	4.5	4.6	11.7	12.7	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)
Severance or dismissal pay.....	.1	.1	.2	.2	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)
Savings and thrift plans.....	.2	.2	.4	.5	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)
Stock purchase plans.....	.1	.1	.1	.2	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)

<sup>1</sup> Excludes nonoffice salesmen.

<sup>2</sup> Less than 0.05 percent or 0.05 cent.

<sup>3</sup> Includes expenditures for vacation and holiday funds, which were not reported with sufficient frequency to warrant presentation; and expenditures

for benefits not fully identified in some reports, which are not included here in the components.

<sup>4</sup> Data reported do not permit publication of separate figures.

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

TABLE 2. AVERAGE EXPENDITURES OF EMPLOYERS FOR PAID LEAVE IN FINANCE, INSURANCE, AND REAL ESTATE INDUSTRIES, ALL ESTABLISHMENTS AND ESTABLISHMENTS WITH EXPENDITURES, BY EMPLOYEE AND INDUSTRY GROUPS,<sup>1</sup> 1961

Employee and industry group	Percent of gross payroll									
	All establishments					Establishments with expenditures for—				
	Total	Vacations	Holidays	Sick leave	Other <sup>2</sup>	Total <sup>3</sup>	Vacations	Holidays	Sick leave	Other <sup>3</sup>
<b>ALL EMPLOYEES</b>										
All industries <sup>4</sup> .....	7.8	3.8	2.7	1.1	0.2	7.9	3.9	2.8	1.3	0.3
Banking <sup>4</sup> .....	8.7	4.1	3.0	1.4	0.2	8.7	4.1	3.0	1.5	0.3
Commercial and stock savings banks.....	8.6	4.1	2.9	1.4	.2	8.6	4.1	3.0	1.5	.3
Credit agencies other than banks.....	7.1	3.8	2.5	.8	.2	7.2	3.8	2.5	1.0	.3
Security and commodity brokers, dealers, ex- changes, and services.....	6.0	2.9	2.2	.8	.1	6.0	2.9	2.2	1.0	.2
Insurance carriers.....	9.1	4.2	3.1	1.5	.3	9.1	4.2	3.1	1.6	.3
Insurance agents, brokers, and service.....	7.7	3.9	2.8	.9	.1	7.8	3.9	2.8	1.3	.3
Real estate.....	5.8	3.1	2.2	.5	( <sup>5</sup> )	6.1	3.3	2.4	.9	.2
<b>SUPERVISORY EMPLOYEES</b>										
All industries <sup>4</sup> .....	8.0	4.4	2.7	.9	.2	8.3	4.6	2.8	1.3	.3
Banking <sup>4</sup> .....	9.4	5.0	3.0	1.1	0.2	9.4	5.1	3.1	1.4	0.4
Commercial and stock savings banks.....	9.3	4.9	3.0	1.1	.2	9.3	5.0	3.1	1.4	.4
Credit agencies other than banks.....	7.3	4.2	2.4	.6	.1	7.3	4.2	2.4	1.2	.4
Security and commodity brokers, dealers, ex- changes, and services.....	6.6	3.5	2.2	.7	.1	6.9	3.7	2.4	1.1	.2
Insurance carriers.....	9.2	4.8	3.1	1.1	.2	9.3	4.8	3.1	1.3	.3
Insurance agents, brokers, and service.....	7.7	4.3	2.7	.7	.1	7.8	4.4	2.7	1.2	.4
Real estate.....	6.0	3.4	2.0	.5	( <sup>5</sup> )	6.8	4.0	2.4	1.3	.2
<b>NONSUPERVISORY EMPLOYEES</b>										
All industries <sup>4</sup> .....	7.7	3.5	2.8	1.2	.2	7.8	3.5	2.8	1.5	.3
Banking <sup>4</sup> .....	8.3	3.7	2.9	1.5	0.2	8.3	3.7	3.0	1.6	0.3
Commercial and stock savings banks.....	8.3	3.6	2.9	1.5	.2	8.3	3.6	3.0	1.6	.3
Credit agencies other than banks.....	7.0	3.4	2.5	.9	.2	7.0	3.5	2.6	1.1	.4
Security and commodity brokers, dealers, ex- changes, and services.....	5.8	2.7	2.2	.8	.1	5.8	2.7	2.2	1.0	.2
Insurance carriers.....	9.0	3.9	3.2	1.7	.3	9.0	3.9	3.2	1.8	.4
Insurance agents, brokers, and service.....	7.8	3.6	2.9	1.1	.1	7.8	3.6	3.0	1.5	.3
Real estate.....	5.7	3.0	2.2	.5	.1	6.0	3.2	2.4	.9	.2

Employee and industry group	Cents per hour paid for									
	All establishments					Establishments with expenditures for—				
	Total	Vacations	Holidays	Sick leave	Other <sup>2</sup>	Total <sup>3</sup>	Vacations	Holidays	Sick leave	Other <sup>3</sup>
<b>ALL EMPLOYEES</b>										
All industries <sup>4</sup> .....	20.3	9.9	7.1	2.9	0.5	20.5	10.0	7.3	3.5	0.8
Banking <sup>4</sup> .....	20.7	9.8	7.1	3.2	0.5	20.7	9.9	7.2	3.5	0.8
Commercial and stock savings banks.....	20.4	9.7	7.0	3.2	.5	20.4	9.7	7.1	3.5	.8
Credit agencies other than banks.....	18.6	9.8	6.4	2.0	.4	18.6	9.9	6.5	2.5	.9
Security and commodity brokers, dealers, ex- changes, and services.....	24.9	12.0	9.1	3.3	.5	24.9	12.0	9.1	3.9	.8
Insurance carriers.....	23.3	10.7	8.0	3.9	.7	23.3	10.8	8.0	4.1	.8
Insurance agents, brokers, and service.....	21.9	11.0	7.9	2.6	.4	22.0	11.0	8.0	3.6	.9
Real estate.....	13.7	7.3	5.1	1.2	.1	14.3	7.7	5.6	2.2	.6
<b>SUPERVISORY EMPLOYEES</b>										
All industries <sup>4</sup> .....	40.4	21.9	13.4	4.3	.8	41.7	23.3	14.1	6.9	1.8
Banking <sup>4</sup> .....	46.3	24.7	15.0	5.5	1.0	46.3	24.9	15.2	6.9	2.0
Commercial and stock savings banks.....	45.4	24.1	14.6	5.5	1.1	45.4	24.3	14.8	7.0	2.1
Credit agencies other than banks.....	33.5	19.2	10.8	2.8	.7	33.7	19.6	11.0	5.7	2.1
Security and commodity brokers, dealers, ex- changes, and services.....	52.3	28.1	17.8	5.7	.7	58.6	31.6	20.0	9.1	2.0
Insurance carriers.....	45.2	23.3	15.2	5.6	1.1	45.5	23.7	15.3	6.6	1.5
Insurance agents, brokers, and service.....	41.1	22.8	14.1	3.5	.6	41.6	24.0	14.4	6.3	1.9
Real estate.....	29.9	16.9	10.2	2.6	.2	34.6	21.4	12.6	7.8	1.6
<b>NONSUPERVISORY EMPLOYEES</b>										
All industries <sup>4</sup> .....	15.7	7.1	5.6	2.5	.4	15.8	7.2	5.8	3.1	.7
Banking <sup>4</sup> .....	15.4	6.8	5.5	2.8	0.4	15.4	6.8	5.5	3.0	0.6
Commercial and stock savings banks.....	15.2	6.7	5.3	2.7	.4	15.2	6.7	5.4	3.0	.8
Credit agencies other than banks.....	13.7	6.7	5.0	1.7	.3	13.7	6.8	5.1	2.2	.8
Security and commodity brokers, dealers, ex- changes, and services.....	20.1	9.2	7.6	2.8	.5	20.2	9.2	7.6	3.4	.8
Insurance carriers.....	18.0	7.7	6.3	3.4	.6	18.0	7.7	6.3	3.6	.8
Insurance agents, brokers, and service.....	16.4	7.6	6.2	2.4	.3	16.5	7.7	6.3	3.2	.6
Real estate.....	11.2	5.8	4.3	1.0	.1	11.7	6.2	4.8	2.0	.6

<sup>1</sup> Excluding nonoffice salesmen.<sup>2</sup> Includes military, jury, witness, voting, and personal leave.<sup>3</sup> The detail does not add to the total because a different payroll or hours base was used for each item.<sup>4</sup> Includes industries not shown separately.<sup>5</sup> Less than 0.05 percent.

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

(table 3). In the establishments with premium pay expenditures, which employed 73.0 percent of all workers, the total of such payments constituted 0.9 percent of gross payroll. For all industry groups combined, in terms of percent of gross payroll, premium pay expenditures were considerably greater for nonsupervisory than for supervisory employees; for the former, they constituted 1.0 percent of the gross payroll of all employees and for the latter, 0.1 percent. Expenditures for premium pay were low in all of the industry groups studied separately; the highest figure on an all-establishment basis was the 1.1 percent of gross payroll for all employees found among security and commodity brokers, dealers, exchanges, and services.

In terms of cents per hour paid for, establishments in the three industries spent on the average 1.8 cents for premium pay, of which 1.7 cents were for overtime, weekend, and holiday work premiums. Corresponding averages for establishments with premium pay expenditures were 2.4 and 2.3 cents, respectively. The all-establishment average for total premium pay for supervisory employees was only 0.4 cent per hour, but that for nonsupervisory workers was significantly higher—2.1 cents. On an all-establishment basis, the total premium pay expenditures computed for individual industry groups ranged from 4.4 cents per hour in the security and commodity brokers, dealers, exchanges, and services group to 0.7 cent in the insurance agents, brokers, and service group.

TABLE 3. AVERAGE EXPENDITURES OF EMPLOYERS FOR PREMIUM PAY IN FINANCE, INSURANCE, AND REAL ESTATE INDUSTRIES, ALL ESTABLISHMENTS AND ESTABLISHMENTS WITH EXPENDITURES, BY EMPLOYEE AND INDUSTRY GROUPS,<sup>1</sup> 1961

Employee and industry group	Percent of gross payroll					Cents per hour paid for				
	All establishments			Establishments with expenditures <sup>2</sup> for—		All establishments			Establishments with expenditures <sup>2</sup> for—	
	Total	Overtime, weekend, and holiday work premiums	Shift differentials	Total <sup>3</sup>	Overtime, weekend, and holiday work premiums	Total	Overtime, weekend, and holiday work premiums	Shift differentials	Total <sup>3</sup>	Overtime, weekend, and holiday work premiums
<b>ALL EMPLOYEES</b>										
All industries <sup>4</sup> .....	0.7	0.7	( <sup>5</sup> )	0.9	0.9	1.8	1.7	0.1	2.4	2.3
Banking <sup>4</sup> .....	0.8	0.7	0.1	0.9	0.9	1.9	1.8	0.1	2.3	2.1
Commercial and stock savings banks.....	.8	.8	.1	.9	.9	1.9	1.8	.2	2.2	2.0
Credit agencies other than banks.....	.6	.6	( <sup>5</sup> )	.9	.9	1.6	1.6	( <sup>5</sup> )	2.3	2.3
Security and commodity brokers, dealers, exchanges, and services.....	1.1	1.1	( <sup>5</sup> )	1.3	1.3	4.4	4.4	( <sup>5</sup> )	5.2	5.2
Insurance carriers.....	.6	.5	( <sup>5</sup> )	.6	.6	1.4	1.4	.1	1.6	1.5
Insurance agents, brokers, and service.....	.3	.3	-----	.6	.6	.7	.7	-----	1.6	1.6
Real estate.....	.9	.9	( <sup>5</sup> )	1.9	1.8	2.1	2.0	( <sup>5</sup> )	4.2	4.0
<b>SUPERVISORY EMPLOYEES</b>										
All industries <sup>4</sup> .....	.1	.1	( <sup>5</sup> )	.7	.9	.4	.4	( <sup>5</sup> )	3.4	4.2
Banking <sup>4</sup> .....	0.1	0.1	( <sup>5</sup> )	0.4	0.4	0.3	0.2	( <sup>5</sup> )	1.9	2.2
Commercial and stock savings banks.....	.1	( <sup>5</sup> )	( <sup>5</sup> )	.3	.4	.3	.2	( <sup>5</sup> )	1.7	1.9
Credit agencies other than banks.....	.1	.1	( <sup>5</sup> )	.6	.6	.4	.4	( <sup>5</sup> )	3.1	2.9
Security and commodity brokers, dealers, exchanges, and services.....	.1	.1	( <sup>5</sup> )	1.7	1.7	1.2	1.2	( <sup>5</sup> )	11.5	11.5
Insurance carriers.....	.1	.1	( <sup>5</sup> )	.6	1.1	.5	.5	( <sup>5</sup> )	2.7	5.4
Insurance agents, brokers, and service.....	( <sup>5</sup> )	( <sup>5</sup> )	-----	.8	.8	.1	.1	-----	4.2	4.2
Real estate.....	.1	.1	( <sup>5</sup> )	1.9	1.7	.7	.7	( <sup>5</sup> )	7.5	7.0
<b>NONSUPERVISORY EMPLOYEES</b>										
All industries <sup>4</sup> .....	1.0	1.0	( <sup>5</sup> )	1.3	1.3	2.1	2.0	0.1	2.7	2.6
Banking <sup>4</sup> .....	1.2	1.1	0.1	1.4	1.3	2.3	2.1	0.2	2.6	2.4
Commercial and stock savings banks.....	1.2	1.1	.1	1.4	1.3	2.3	2.1	.2	2.6	2.4
Credit agencies other than banks.....	1.0	1.0	( <sup>5</sup> )	1.4	1.4	2.0	2.0	( <sup>5</sup> )	2.8	2.8
Security and commodity brokers, dealers, exchanges, and services.....	1.4	1.4	( <sup>5</sup> )	1.6	1.6	5.0	5.0	( <sup>5</sup> )	5.6	5.6
Insurance carriers.....	.8	.8	( <sup>5</sup> )	.9	.9	1.6	1.6	.1	1.8	1.8
Insurance agents, brokers, and service.....	.4	.4	-----	.9	.9	.9	.9	-----	2.0	2.0
Real estate.....	1.2	1.1	( <sup>5</sup> )	2.2	2.1	2.3	2.2	( <sup>5</sup> )	4.4	4.3

<sup>1</sup> Excluding nonoffice salesmen.

<sup>2</sup> Expenditure data for shift differentials in establishments with expenditures for this item do not meet publication criteria.

<sup>3</sup> The detail does not add to the total because a different payroll or hours base was used for each item and because expenditures for shift differentials are not shown separately.

<sup>4</sup> See footnote 4, table 2.

<sup>5</sup> Less than 0.05 percent or 0.05 cent.

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



TABLE 4. AVERAGE EXPENDITURES OF EMPLOYERS FOR CHRISTMAS, YEAREND, AND OTHER IRREGULAR BONUSES IN FINANCE, INSURANCE, AND REAL ESTATE INDUSTRIES, ALL ESTABLISHMENTS AND ESTABLISHMENTS WITH EXPENDITURES, BY EMPLOYEE AND INDUSTRY GROUPS,<sup>1</sup> 1961

Employee and industry group	Percent of gross payroll		Cents per hour paid for—	
	All establishments	Establishments with expenditures	All establishments	Establishments with expenditures
<b>ALL EMPLOYEES</b>				
All industries <sup>2</sup> .....	3.5	5.0	9.0	13.1
Banking <sup>2</sup> .....	4.8	6.0	11.4	14.3
Commercial and stock savings banks.....	4.8	6.0	11.5	14.2
Credit agencies other than banks.....	3.7	5.4	9.5	13.8
Security and commodity brokers, dealers, exchanges, and services.....	9.1	9.4	37.5	39.3
Insurance carriers.....	1.2	1.9	3.2	4.9
Insurance agents, brokers, and service.....	3.7	5.2	10.3	15.6
Real estate.....	3.0	5.5	7.0	12.9
<b>SUPERVISORY EMPLOYEES</b>				
All industries <sup>2</sup> .....	5.4	8.3	27.0	43.1
Banking <sup>2</sup> .....	5.8	7.5	28.9	36.8
Commercial and stock savings banks.....	6.0	7.6	29.1	36.8
Credit agencies other than banks.....	5.4	7.8	24.6	36.4
Security and commodity brokers, dealers, exchanges, and services.....	13.0	16.5	103.8	139.7
Insurance carriers.....	1.6	2.5	7.6	12.7
Insurance agents, brokers, and service.....	5.7	10.2	30.5	62.3
Real estate.....	7.2	14.4	36.2	81.9
<b>NONSUPERVISORY EMPLOYEES</b>				
All industries <sup>2</sup> .....	2.6	3.9	5.3	8.1
Banking <sup>2</sup> .....	4.1	5.4	7.6	10.1
Commercial and stock savings banks.....	4.1	5.4	7.6	9.9
Credit agencies other than banks.....	2.3	3.7	4.6	6.9
Security and commodity brokers, dealers, exchanges, and services.....	7.6	7.8	26.1	27.0
Insurance carriers.....	1.1	1.8	2.2	3.6
Insurance agents, brokers, and service.....	2.2	3.2	4.6	7.0
Real estate.....	1.3	2.7	2.5	5.0

<sup>1</sup> Excluding nonoffice salesmen.

<sup>2</sup> See footnote 4, table 2.

## Bonuses

Expenditures for Christmas, yearend, and other irregular bonuses, which constituted 3.5 percent of the all-employee gross payroll, amounted to 5.4 percent of gross payroll for supervisors and only 2.6 percent for nonsupervisory employees (table 4). In establishments paying such bonuses, which employed 68.7 percent of all employees, the figures were 5.0 percent for all employees, 8.3 percent for supervisors, and 3.9 percent for nonsupervisory workers. Expenditures for bonuses were particularly high in the security and commodity brokers, dealers, exchanges, and services group where, on an all-establishment basis, they amounted to 9.1 percent of gross payroll for all employees, 13.0

percent for supervisors, and 7.6 percent for non-supervisory employees.

Bonus expenditures for all employees amounted to 9.0 cents per hour paid for in all establishments and 13.1 cents in establishments with expenditures for bonuses. Among the industry groups for which separate ratios were determined, by far the highest ratios were in the security and commodity brokers, dealers, exchanges, and services group, where expenditures on an all-establishment basis were 37.5 cents per hour paid for in the case of all employees, 103.8 cents for supervisors, and 26.1 cents for nonsupervisory personnel.

## Legally Required Insurance

Employer payments for legally required insurance programs<sup>5</sup> were equal to 3.6 percent of gross payroll (table 5). Payments for old-age, survivors, and disability insurance equaled 2.2 percent of gross payroll; unemployment compensation, 1.1 percent; workmen's compensation, 0.2 percent; and other legally required insurance (mainly temporary disability insurance in California, New Jersey, and New York), 0.1 percent. On an all-industry basis, as a percent of gross payroll, expenditures were higher for nonsupervisory than for supervisory employees for each of the legally required insurance programs. Among the industry groups studied, the highest expenditure ratio for all employees, 4.8 percent, was found in real estate. Reflecting the fact that many of its employees were not in office jobs, the real estate group had workmen's compensation expenditure ratios considerably greater than the other industry groups studied.

In all industry groups combined, expenditures for legally required insurance averaged 9.4 cents per hour paid for, of which 5.8 cents were for old-age, survivors, and disability insurance; 2.8 cents for unemployment compensation; 0.6 cent for workmen's compensation; and 0.1 cent for other legally required insurance. On an all-employee basis, expenditures for total legally required insurance were higher in the real estate (11.2 cents) and security and commodity brokers, dealers, exchanges, and services (11.1 cents) groups than in the other industry groups studied.

<sup>5</sup> Because all establishments are covered by some legally required insurance program, expenditure data for these items are presented here solely on an all-establishment basis.

TABLE 5. AVERAGE EXPENDITURES OF EMPLOYERS FOR LEGALLY REQUIRED INSURANCE PAYMENTS IN FINANCE, INSURANCE, AND REAL ESTATE INDUSTRIES, ALL ESTABLISHMENTS, BY EMPLOYEE AND INDUSTRY GROUPS,<sup>1</sup> 1961

Employee and industry group	Percent of gross payroll					Cents per hour paid for—				
	Total	OASDI <sup>2</sup>	Unemployment compensation	Workmen's compensation	Other <sup>3</sup>	Total	OASDI <sup>2</sup>	Unemployment compensation	Workmen's compensation	Other <sup>3</sup>
<b>ALL EMPLOYEES</b>										
All industries <sup>4</sup> .....	3.6	2.2	1.1	0.2	0.1	9.4	5.8	2.8	0.6	0.1
Banking <sup>4</sup> .....	3.6	2.4	1.1	0.1	0.1	8.6	5.6	2.6	0.3	0.1
Commercial and stock savings banks.....	3.6	2.4	1.1	.1	( <sup>5</sup> )	8.5	5.6	2.5	.3	.1
Credit agencies other than banks.....	3.4	2.3	1.0	.1	( <sup>5</sup> )	8.8	5.9	2.5	.3	( <sup>5</sup> )
Security and commodity brokers, dealers, exchanges, and services.....	2.7	1.6	.9	.1	.1	11.1	6.6	3.7	.4	.4
Insurance carriers.....	3.4	2.3	1.0	.1	( <sup>5</sup> )	8.8	5.8	2.6	.3	.1
Insurance agents, brokers, and service.....	3.3	2.1	.9	.2	.1	9.3	6.0	2.6	.5	.2
Real estate.....	4.8	2.3	1.5	.8	.1	11.2	5.5	3.5	1.9	.3
<b>SUPERVISORY EMPLOYEES</b>										
All industries <sup>4</sup> .....	2.2	1.4	.6	.1	( <sup>5</sup> )	11.0	7.2	2.9	.7	.1
Banking <sup>4</sup> .....	2.1	1.5	0.6	0.1	( <sup>5</sup> )	10.6	7.2	2.8	0.4	0.1
Commercial and stock savings banks.....	2.1	1.5	.6	.1	( <sup>5</sup> )	10.4	7.2	2.7	.4	.1
Credit agencies other than banks.....	2.2	1.6	.6	.1	( <sup>5</sup> )	10.2	7.1	2.6	.4	( <sup>5</sup> )
Security and commodity brokers, dealers, exchanges, and services.....	1.5	.9	.4	.1	( <sup>5</sup> )	11.8	7.3	3.6	.5	.4
Insurance carriers.....	2.2	1.5	.6	.1	( <sup>5</sup> )	10.8	7.4	2.9	.5	( <sup>5</sup> )
Insurance agents, brokers, and service.....	1.9	1.3	.5	.1	( <sup>5</sup> )	10.3	7.1	2.6	.6	.1
Real estate.....	2.6	1.4	.7	.4	0.1	13.2	7.1	3.7	2.0	.3
<b>NONSUPERVISORY EMPLOYEES</b>										
All industries <sup>4</sup> .....	4.4	2.7	1.4	.3	.1	9.0	5.4	2.8	.6	.1
Banking <sup>4</sup> .....	4.4	2.9	1.4	0.2	0.1	8.2	5.3	2.5	0.3	0.1
Commercial and stock savings banks.....	4.4	2.9	1.4	.1	.1	8.1	5.3	2.5	.3	.1
Credit agencies other than banks.....	4.3	2.8	1.3	.2	( <sup>5</sup> )	8.4	5.5	2.5	.3	( <sup>5</sup> )
Security and commodity brokers, dealers, exchanges, and services.....	3.2	1.9	1.1	.1	.1	10.9	6.5	3.7	.4	.4
Insurance carriers.....	4.1	2.7	1.2	.2	( <sup>5</sup> )	8.3	5.4	2.5	.3	.1
Insurance agents, brokers, and service.....	4.3	2.7	1.3	.2	.1	9.0	5.7	2.7	.4	.2
Real estate.....	5.6	2.7	1.8	1.0	.1	10.9	5.2	3.5	1.9	.3

<sup>1</sup> Excluding nonoffice salesmen.<sup>2</sup> Old-age, survivors, and disability insurance.<sup>3</sup> Mainly temporary disability insurance.<sup>4</sup> See footnote 4, table 2.<sup>5</sup> Less than 0.05 percent or 0.05 cent.

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

## Private Welfare Plans

Employer contributions to private welfare plans<sup>6</sup> equaled 6.9 percent of the gross payroll of all establishments (table 6). The major expenditures were for pension and retirement plans (4.5 percent) and for health, accident, and life insurance (1.9 percent). The remaining expenditures were for severance or dismissal pay, savings and thrift plans, stock purchase plans, and—infrequently—payments to vacation and holiday funds. Establishments with expenditures for private welfare plans employed 90.9 percent of all workers. For those establishments, the percentages were 7.4 for total private welfare plans; 6.1 for pension and retirement plans; and 2.1 for health, accident, and life insurance. Among the industry groups studied, the highest total private welfare plan expenditure ratio for all establishments, 9.3 percent, was in banking; the lowest, 4.1 percent, in real estate.

For each hour paid for, establishments in the three industries spent 17.9 cents for private welfare plans, of which 11.7 cents were for pension and retirement plans and 4.9 cents were for health, accident, and life insurance. The comparable figures for establishments with expenditures for the practice were 19.4, 16.2, and 5.5 cents, respectively. On a cents-per-hour-paid-for basis, expenditures for total private welfare plans were higher in the security and commodity brokers, dealers, exchanges, and services group (22.5 cents for all establishments and 23.5 cents for establishments with expenditures) than in any other industry group studied.

## Composition of Payroll Hours

A few decades ago, hours paid for and those spent at the plant were not significantly different

<sup>6</sup> Expenditures for private welfare plans could not be computed separately for supervisory and nonsupervisory employees. Generally, the same plan covers all workers and data are not maintained separately.

TABLE 6. AVERAGE EXPENDITURES OF EMPLOYERS FOR PRIVATE WELFARE PLANS IN FINANCE, INSURANCE, AND REAL ESTATE INDUSTRIES, ALL EMPLOYEES,<sup>1</sup> ALL ESTABLISHMENTS AND ESTABLISHMENTS WITH EXPENDITURES, BY INDUSTRY GROUP, 1961

Industry	All establishments						Establishments with expenditures for 2—			
	Total 3	Health, accident, and life insurance	Pension and retirement plans	Severance or dismissal pay	Savings and thrift plans	Stock purchase plans	Total 4	Health, accident, and life insurance	Pension and retirement plans	Severance or dismissal pay
Percent of gross payroll										
All industries 5	6.9	1.9	4.5	0.1	0.2	0.1	7.4	2.1	6.1	0.3
Banking 5	9.3	2.1	6.1	(6)	0.4	(6)	9.3	2.2	7.1	0.1
Commercial and stock savings banks	9.2	2.0	5.9	(6)	.5	(6)	9.2	2.1	7.0	.2
Credit agencies other than banks	6.4	1.9	4.0	0.1	.2	0.2	6.8	2.0	5.7	.4
Security and commodity brokers, dealers, exchanges, and services	5.5	1.6	3.6	(6)	.1	(6)	5.7	1.6	5.8	.2
Insurance carriers	8.0	2.1	5.6	.1	(6)	(6)	8.0	2.1	6.2	.2
Insurance agents, brokers, and service	4.4	1.7	2.3	.1	.2	—	4.8	2.0	4.4	.4
Real estate	4.1	1.6	2.2	.1	(6)	.1	5.4	2.1	4.8	.4
Cents per hour paid for										
All industries 5	17.9	4.9	11.7	0.2	0.4	0.1	19.4	5.5	16.2	0.7
Banking 5	22.3	5.0	14.5	0.1	1.0	0.1	22.5	5.3	17.0	0.4
Commercial and stock savings banks	21.8	4.7	14.1	.1	1.1	.1	22.0	5.0	16.6	.4
Credit agencies other than banks	16.7	4.9	10.4	.3	.4	.6	17.7	5.3	14.9	1.1
Security and commodity brokers, dealers, exchanges, and services	22.5	6.5	14.9	.2	.6	(6)	23.5	6.8	24.2	.8
Insurance carriers	20.4	5.4	14.4	.3	(6)	.1	20.6	5.5	16.0	.6
Insurance agents, brokers, and service	12.3	4.9	6.6	.3	.6	—	13.7	5.6	12.4	1.6
Real estate	9.5	3.7	5.3	.2	.1	.2	13.6	5.4	13.0	1.0

<sup>1</sup> Excluding nonoffice salesmen.<sup>2</sup> Data for savings and thrift plans and stock purchase plans in establishments with expenditures for such plans do not meet publication criteria.<sup>3</sup> See footnote 3, table 1.<sup>4</sup> Detail does not add to total as some reported expenditures were included

in the total but not in the components. See footnotes 2 and 3 above. Furthermore, a different payroll or hours base was used for each item.

<sup>5</sup> See footnote 4, table 2.<sup>6</sup> Less than 0.05 percent or 0.05 cent.

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

TABLE 7. PLANT HOURS AND PAID-LEAVE HOURS AS PERCENTS OF TOTAL HOURS PAID FOR IN FINANCE, INSURANCE, AND REAL ESTATE INDUSTRIES, BY EMPLOYEE AND INDUSTRY GROUPS,<sup>1</sup> 1961

Employee and industry group	Total hours paid for	Plant hours	Paid leave hours <sup>2</sup>				
			Total	Vacations	Holidays	Sick leave	Other <sup>3</sup>
ALL EMPLOYEES							
All industries <sup>4</sup> .....	100.0	92.0	8.0	3.7	2.9	1.2	0.2
Banking <sup>4</sup> .....	100.0	91.1	8.9	4.0	3.1	1.5	0.3
Commercial and stock savings banks .....	100.0	91.2	8.8	4.0	3.1	1.5	.3
Credit agencies other than banks .....	100.0	92.9	7.1	3.6	2.5	.9	.2
Security and commodity brokers, dealers, exchanges, and services .....	100.0	92.6	7.4	3.4	2.8	1.1	.2
Insurance carriers .....	100.0	90.9	9.1	4.0	3.2	1.7	.3
Insurance agents, brokers, and service .....	100.0	92.3	7.7	3.6	2.9	1.0	.1
Real estate .....	100.0	94.4	5.6	2.9	2.1	.5	( <sup>5</sup> )
SUPERVISORY EMPLOYEES							
All industries <sup>4</sup> .....	100.0	91.8	8.2	4.3	2.8	.9	.2
Banking <sup>4</sup> .....	100.0	90.5	9.5	5.0	3.2	1.2	0.2
Commercial and stock savings banks .....	100.0	90.5	9.5	4.9	3.1	1.2	.3
Credit agencies other than banks .....	100.0	92.4	7.6	4.2	2.5	.7	.2
Security and commodity brokers, dealers, exchanges, and services .....	100.0	92.3	7.7	4.0	2.6	1.0	.1
Insurance carriers .....	100.0	90.7	9.3	4.7	3.2	1.2	.2
Insurance agents, brokers, and service .....	100.0	92.1	7.9	4.3	2.9	.6	.1
Real estate .....	100.0	94.0	6.0	3.2	2.2	.5	( <sup>5</sup> )
NONSUPERVISORY EMPLOYEES							
All industries <sup>4</sup> .....	100.0	92.1	7.9	3.5	2.9	1.3	.2
Banking <sup>4</sup> .....	100.0	91.3	8.7	3.8	3.1	1.6	0.3
Commercial and stock savings banks .....	100.0	91.3	8.7	3.8	3.1	1.5	.3
Credit agencies other than banks .....	100.0	93.0	7.0	3.3	2.5	.9	.2
Security and commodity brokers, dealers, exchanges, and services .....	100.0	92.6	7.4	3.3	2.8	1.1	.2
Insurance carriers .....	100.0	91.0	9.0	3.8	3.2	1.8	.3
Insurance agents, brokers, and service .....	100.0	92.4	7.6	3.5	2.9	1.1	.1
Real estate .....	100.0	94.5	5.5	2.9	2.1	.5	( <sup>5</sup> )

<sup>1</sup> Excludes nonoffice salesmen.<sup>2</sup> Includes only leave for which the employer made payment directly to the worker. Employer contributions to funds that distribute benefits to workers are excluded.<sup>3</sup> See footnote 2, table 2.<sup>4</sup> See footnote 4, table 2.<sup>5</sup> Less than 0.05 percent.

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



for most purposes. The growth of paid leave hours, particularly for vacations and holidays, has introduced substantial variation between the two statistical measures.

In 1961, for all employees covered by the survey, paid leave hours<sup>7</sup> constituted 8.0 percent of the total number of hours paid for (table 7). This included 3.7 percent for vacations, 2.9 percent for holidays, 1.2 percent for sick leave, and 0.2 percent for military, jury, witness, voting, and personal leave.

Among the industry groups studied, individually, paid leave hours varied from 9.1 percent of total hours paid for in insurance carriers, and

<sup>7</sup> For purposes of this study, "paid leave hours" were defined to cover paid leave time away from company premises and not spent on company business; and as the number of hours for which pay was given, rather than the time spent away from company premises. "Plant hours" included all other hours paid for, among them rest and lunch periods, standby time, and other paid nonworking time that is usually spent at the plant or office.

8.9 percent in banking, to 5.6 percent in real estate. In each of the industry groups, vacation hours were the main form of paid leave hours.

For supervisory employees in all industries combined, paid leave hours accounted for 8.2 percent of total hours paid for, whereas for non-supervisory employees the figure was slightly lower—7.9 percent. Similarly, vacation hours as a percentage of total hours paid for were greater for supervisory than for nonsupervisory employees. Conversely, on an all-industry basis, sick leave hours were a greater percentage of total paid-for hours in the case of nonsupervisory employees. Little difference was found between supervisory and nonsupervisory employees with respect to holiday and miscellaneous leave hours as percentages of total hours paid for.

—VICTOR J. SHEIFER

Division of National Wage and Salary Income

The tenth annual report of the president and treasurer of the Carnegie Foundation for the Advancement of Teaching contains a section on pensions in which is included a chapter and tabular statement on industrial and institutional pensions. . . . With few exceptions the burden of the pension is borne by the employers, and where the employees are required to contribute, the amount assessed ranges from 2 percent to 3½ percent of the salary up to \$5,000.

. . . it is stated that the United States Steel and Carnegie pension fund has availed itself of [the right to make such changes in the plans as experience demands.] For example, at the end of 4 years, after an experience with 2,000 pensioners, it has found that the average age of retirement was 65.56 years, while the regulations permitted retirement at 60; and that the retirement took place on an average after 30 years of service instead of 25 years permitted by the regulations. Hence, the age of retirement has been raised from 60 to 65, and the length of service from 25 to 30 years. . . .

Fifty-eight corporations are listed, 17 of which are railroad or street railway companies, 9 are banks, and 1 an insurance company. The earliest in point of establishment of those described in the report is the pension system of the American Express Co., inaugurated in 1875. About half (26, or 44.8 percent) of the plans were started in 1913, 1914, and 1915.

—From *Monthly Review of the Bureau of Labor Statistics*, November 1916, pp. 129-130.

## Wage Chronology: Massachusetts Shoe Manufacturing

### Supplement No. 5—1963-64<sup>1</sup>

A SHORT STRIKE by the United Shoe Workers of America ended early in January 1963 when the union concluded new contracts with 32 north-eastern Massachusetts shoe manufacturers employing some 7,000 of its members. The shoe workers had voted to strike after their contracts expired at midnight December 31, 1962, unless a new contract was negotiated. The companies had sought to extend the old agreement for 1 year.

With shoe workers on strike, the union submitted revised contract proposals to the companies on January 2, 1963, the first workday of the year. Fifteen shoe manufacturing companies in the Boston area accepted a 2-year contract later the same day, and their 3,500 employees returned to work on January 3. In the Haverhill area, a 2-day strike of 3,500 shoe workers in 17 factories ended when employees reported to work on January 4, after manufacturers had accepted a similar contract on the evening of January 3.

To permit the suspension of negotiations during the New Year holidays, the parties agreed to change the expiration date of the contract to January 6, 1965, from the traditional December 31.

The contract, which was estimated by the companies to cost 9½ to 10 cents an hour, provided for general wage increases of 3 cents an hour on January 1 of both 1963 and 1964, and increased minimum wage rates. Another paid holiday was added, bringing the total to 8, and insurance benefits were improved. To meet the challenge of automation, technologically displaced workers were given preference for new job openings in their department, and where technology reduced the skill level of jobs, workers already on the payroll were protected against wage decreases, so long as their output was maintained. In some cases, this was a continuation of a practice already in effect.

After accumulating contributions for 2 years, the parties agreed in the spring of 1961 to the benefits that would be available from the pension plan established December 31, 1958. A dual benefit schedule was adopted—one for employees retiring after January 1, 1961, and before January 1, 1962, and another for those retiring after the latter date.

The following tables bring the changes in wages and related practices for the Massachusetts Shoe Manufacturing Wage Chronology up to January 6, 1965.

<sup>1</sup> For basic chronology and earlier supplements, see *Monthly Labor Review*, February 1952, pp. 169-172; July 1953, pp. 751-752; August 1958, pp. 886-887; July 1960, pp. 727-728; and September 1961, pp. 990-991; or BLS Report 209.

### A—General Wage Changes

Effective date	Provision	Applications, exceptions, and other related matters
Jan. 1, 1963 (agreement dated Jan. 2, 1963).	3 cents an hour increase-----	Added to total earnings. Piece-rate schedules were not revised. Agreement also provided deferred increase effective Jan. 1, 1964. Deferred increase added to total earnings. Piece-rate schedules were not revised.
Jan. 1, 1964 (agreement dated Jan. 2, 1963).	3 cents an hour increase-----	

## B—Minimum Plant Wage Rates

Effective date	Minimum hourly rate <sup>1</sup>	Applications, exceptions, and other related matters
Jan. 1, 1961-----	\$1. 26	\$1.10 minimum for learners.
Sept. 3, 1961-----		\$1.15 minimum for learners, in accordance with amendment to Fair Labor Standards Act.
Jan. 1, 1963-----	\$1. 29	\$1.15 minimum for learners; \$1.51 for packers and repairers.
Sept. 1, 1963-----	\$1. 32	\$1.25 minimum for learners, in accordance with the Fair Labor Standards Act; \$1.54 for packers and repairers.
Jan. 1, 1964-----	\$1. 35	\$1.57 minimum for packers and repairers.

<sup>1</sup> Applied to employees who had 3 months of employment in any shoe factory, whether on daywork or piecework and makeup.

## C—Related Wage Practices

Effective date	Provision	Applications, exceptions, and other related matters
<i>Holiday Pay</i>		
Jan. 1, 1963 (agreement dated Jan. 2, 1963).	Added: 1 paid holiday (total 8)-----	Holiday was Columbus Day.
<i>Technological Change Pay</i>		
Jan. 1, 1963 (agreement dated Jan. 2, 1963).	Established: Previous average hourly earnings guaranteed employees required to use new machinery or machinery requiring the same or less skill or effort; wage rate to be set by negotiation or arbitration if higher skill required.	Practice in effect and continued: Employees whose jobs were eliminated by technological change given preference in assignment to new or improved machinery. Added: Employees whose jobs were eliminated by technological change given preference to any job opening in department. <sup>1</sup>
<i>Group Insurance Benefits</i>		
Jan. 1, 1963 (agreement dated Jan. 2, 1963).	Increased: <i>Daily hospital benefits</i> —to \$18 (maximum \$558). <i>Sickness and accident benefits</i> —to \$20 (maximum \$260).	
Jan. 1, 1964 (agreement dated Jan. 2, 1963).	Increased: <i>Life insurance</i> —\$1,000 in event of death or total and permanent disability before age 60.	

See footnote at end of table.



## C—Related Wage Practices—Continued

Effective date	Provision	Applications, exceptions, and other related matters
<i>Pension Plan</i>		
Jan. 1, 1961 (Resolution of Board of Trustees dated Nov. 7, 1960, and May 8, 1961).	<p>Activated: Noncontributory plan providing the following benefits, exclusive of social security, for employee age 65 or older with at least 15 years' continuous service who in 1960 or some subsequent year earned more than \$1,200 or worked more than 750 hours in covered employment.</p> <p><i>Normal monthly benefits—</i> For employee retiring after Jan. 1, 1961, but before Jan. 1, 1962: \$4.50 to \$7.75, depending on years of continuous service.<sup>2</sup> For employee retiring after Jan. 1, 1962: \$6.50 to \$38.50, depending on years of continuous service.<sup>3</sup> Accrual of credit units—Employee in covered employment accumulated credit units quarterly for continuous years of service on basis of hours worked; maximum of 4 credit units per year.<sup>4</sup></p> <p><i>Survivors, benefits:</i> Survivors to receive benefits accrued during life but payable after death of retiree.<sup>5</sup></p>	<p>Covered employment defined as: (1) between Jan. 1, 1937, and Dec. 31, 1959—any work in the shoe industry, and (2) after Jan. 1, 1960—work in the shoe industry within the geographic area covered by the retirement program and in a job in the bargaining unit.</p> <p>Benefits also provided employee who retired in 1960 if eligibility requirements were met. Employee permitted to receive benefits while working in covered employment until earnings reached \$1,500 in a calendar year. Continuity of employment broken: (1) From Jan. 1, 1960, if employee quit or was discharged for cause and earned no service credits for 4 consecutive calendar quarters; (2) at any time for reasons not covered in (1) if (a) employee with less than 15 years' service failed to earn service credits for 8 consecutive quarters, or (b) employee with at least 15 years' service failed to earn credits for 12 consecutive quarters, except that employee unable to work for the following reasons was given credit for up to 1 year for disability or total incapacity to work in covered employment; for an unlimited period before Jan. 1, 1961, and up to 2 years thereafter for military service. When 65th birthday occurred during a break in service, employee forfeited all service credit units unless 1 unit was earned after the break.</p>

<sup>1</sup> In practice, this provision applies to any job in the plant.

<sup>2</sup> Plan provided the following schedule of benefits:

Years of covered employment	Monthly pension	Years of covered employment	Monthly pension
15	\$4.50	21	\$6.50
16	5.00	22	6.75
17	5.25	23	7.00
18	5.50	24	7.50
19	5.75	25 (maximum)	7.75
20	6.25		

<sup>3</sup> Benefits for years of covered employment prior to and after Dec. 31, 1961, determined as follows:

For years of covered employment before Dec. 31, 1961:

Years of covered employment	Monthly pension	Years of covered employment	Monthly pension
1	\$5.00	14	\$6.25
2	1.00	15	6.50
3	1.25	16	7.00
4	1.75	17	7.25
5	2.25	18	7.75
6	2.75	19	8.25
7	3.00	20	8.50
8	3.50	21	9.00
9	4.00	22	9.50
10	4.50	23	10.00
11	4.75	24	10.25
12	5.25	25 (maximum)	10.75
13	5.75		

For years of covered employment after Jan. 1, 1962:

Years of covered employment	Monthly pension	Years of covered employment	Monthly pension
1	\$1.25	9	\$11.25
2	2.50	10	12.75
3	3.75	11	14.00
4	5.00	12	15.50
5	6.50	13	16.75
6	7.75	14	18.00
7	9.00	15	19.25
8	10.25		

and increased by \$1.25 every year thereafter to a total of 30 years with the exception of \$1.50 between years 20-21 and 29-30.

<sup>4</sup> Employees credited as follows:

Hours worked during year	Quarter-year credits
Less than 375 hours	0
375 but less than 750	1
750 but less than 1,125	2
1,125 but less than 1,500	3
1,500 or more	4

<sup>5</sup> Priority of survivors:

- (a) person designated as beneficiary by pensioner;
- (b) widow; (c) mother;
- (d) children; (f) brothers and sisters; and
- (g) personal representatives.

Prepared in the Division of Wage Economics

# Significant Decisions in Labor Cases\*

## Labor Relations

*Election Interference.* The United States Supreme Court held<sup>1</sup> that it is an unlawful interference with employees' rights to self-organization under the Labor Management Relations Act to grant improved employee benefits with the purpose of affecting the outcome of a pending representation election, even though the benefits are to be permanent and unconditional.

Shortly after the National Labor Relations Board ordered a representation election at the employer's plant, the employer held a dinner for employees at which they were permitted to vote on whether a previously granted extra day of vacation would be a "floating holiday" or would be taken on their birthdays. Two weeks before the election, the employer sent the employees a letter which spoke of the union's "empty promises" and "the fact that it is the company that puts things in your envelope." Accompanying the letter was a statement of benefits granted by the employer, including new benefits—a new and improved method of computing overtime during holiday weeks, and a new method of scheduling vacations.

The court of appeals accepted the NLRB's opinion<sup>2</sup> that the overtime and vacation benefits were timed to induce the employees to vote against the union, but rejected the Board's finding that an unfair labor practice had been committed under section 8(a)(1) of the LMRA. Its decision turned on the fact that the benefits were put into effect unconditionally with no indication of the possibility of their withdrawal if the union won the election, and that no overall program of restraint and interference was evident.

The Supreme Court unanimously reversed the court of appeals. It reasoned that employer interference in the right of employees to organize for mutual aid may take the form of favors be-

stowed as well as threats or domination. Well-timed increases in benefits carry with them the inference that future benefits will not be forthcoming if the employer's desires are not satisfied. The opinion states: "The danger inherent in well-timed increases in benefits is the suggestion of the fist inside the velvet glove. . . . The danger may be diminished if, as in this case, the benefits are conferred permanently and unconditionally. But the absence of conditions or threats pertaining to the particular benefits conferred would be of controlling significance only if it could be presumed that no question of additional benefits or renegotiation of existing benefits would arise in the future; and, of course, no such presumption is tenable."

The Court noted that, under other circumstances, an overall pattern of interference may be relevant to establish the motive behind grants of benefits and the legality of such grants. In this case, however, the motive was otherwise established and the employer was not free to violate section 8(a)(1) by conferring benefits simply because it refrained "from other, mere obvious violations." The Court said that its opinion is not likely to have the effect of discouraging benefits for labor since such calculated employer good will "is likely to be ephemeral if prompted by a threat of unionization which is subsequently removed."

*Fair Representation.* The U.S. Supreme Court held<sup>3</sup> that an action to enjoin a grievance settlement dovetailing seniority lists of two merged companies was properly brought under section 301 of the LMRA, permitting suits for violation of contracts, and that the settlement did not violate any of the affected employees' rights. The union representing both groups of employees did not breach its duty of fair representation by advocating a position that sacrificed the seniority of some of the members, the Court held.

When one automobile transporter purchased another's authority to do business, a joint

\*Prepared in the U.S. Department of Labor, Office of the Solicitor. The cases covered in this article represent a selection of the significant decisions believed to be of special interest. No attempt has been made to reflect all recent judicial and administrative developments in the field of labor law or to indicate the effect of particular decisions in jurisdiction in which contrary results may be reached based upon local statutory provision, the existence of local precedents, or a different approach by the courts to the issue presented.

<sup>1</sup> *NLRB v. Exchange Parts Co.* (U.S. Sup. Ct., Jan. 13, 1964).

<sup>2</sup> *NLRB v. Exchange Parts Co.*, 304 F. 2d 368 (1962).

<sup>3</sup> *Humphrey v. Moore* (U.S. Sup. Ct., Jan. 6, 1964).

employer-union committee, following a grievance procedure provided in the collective bargaining contract, decided to dovetail the seniority lists of the two companies. Both groups of employees were represented by the same union. The decision required the layoff of many of the purchasing company's employees. The State court granted these employees a permanent injunction against implementation of the award on the grounds that the joint committee exceeded its powers under the existing contract in making its decision, and that the decision was brought about by dishonest union conduct in breach of its duty of fair representation.

Reversing, the Supreme Court ruled that the contract clause which provided the procedure followed by the committee in determining seniority was designed to cover both jobs and seniority at the purchasing company. The State court had ruled that the clause would not come into play unless the purchasing company agreed to hire employees of the absorbed firm. But the Supreme Court read the clause to cover "affected" employees, which included those of the purchased company as well. Seniority rights granted by the determination, said the Court, could be reasonably interpreted to carry the job with them.

On the issue of fair representation, the Court stated there was no indication that the union had breached its duty by supporting the determination of the joint committee. The Court said that there was no breach of the union's duty "in taking a good faith position contrary to that of some individuals it represents nor in supporting the position of one group of employees against that of another." The record demonstrated that "the union had taken its position honestly, in good faith and without hostility or arbitrary discrimination."

Justice White, in his majority opinion, dealt with the question of fair representation as though it were a duty arising from the collective bargaining contract. Justice Goldberg, on the other hand, would not have permitted this duty to be asserted in an action brought under section 301 of the LMRA, since it is a statutory and not a contract duty. Justice Harlan pointed to the additional problem of whether the petitioners' claim resting upon the duty of fair representation could prop-

erly be brought in a State or Federal court, or was within the exclusive jurisdiction of the NLRB.

*Restraint or Coercion.* The NLRB held<sup>4</sup> that a union operating under an agency shop arrangement did not restrain or coerce employees in violation of the LMRA by establishing production earnings ceilings for members on piecework, and by fining members who exceeded them.

The union had a long-standing rule designed to preserve jobs. It limited the amount of incentive pay a member could earn by establishing daily production ceilings on piecework over the minimum contract rates. With the company's consent, the union checked on the earnings of members.

The union found four members guilty of exceeding the quotas and, following a union hearing, levied a penalty against them consisting of up to a year's suspension from membership and fines ranging from \$50 to \$100. When the members failed to pay, the union filed a suit in a State court to recover the amount. The members filed a complaint with the NLRB alleging that the imposition of the fines was in violation of section 8(b) (1) (A) of the act because it restrained or coerced them in their right (under section 7) to refrain from union activity.

The Board dismissed the complaint. Upon examining the legislative history of section 8(b) (1) (A), the Board majority concluded that the Congress had intended only to ban conduct involving the use of force, violence, physical obstruction, or threats in organizational activity and strikes. The intent was not, said the Board, to interfere with internal union discipline.

The proviso in section 8(b) (1) (A) specifies that nothing in the section "shall impair the right of a labor organization to prescribe its own rules with regard to the acquisition or retention of membership therein." The general counsel argued on behalf of the complaining members that because in this instance the fines were collectible as debts by means other than threat of expulsion, they were more than disciplinary measures, had more than incidental relationship to membership, and were therefore outside the protection of the proviso. The Board majority disagreed, noting that there is nothing in the legislative history to indicate that Congress intended to permit a union to enforce a fine by expulsion but not by suing for its collection. Moreover, the majority went on to say, the

<sup>4</sup> *Local 283, United Automobile Workers (Wisconsin Motor Corp.) and Russell Scofield*, 145 NLRB No. 109 (Jan. 17, 1964).



Board has always interpreted the section as not interfering with internal union affairs and Congress has not indicated its dissatisfaction with that interpretation. The majority held that the union's conduct did not impair the members' status as employees.

Member Jenkins, concurring, would have based the decision on the grounds that the parties were free not to join the union and thereby avoid imposition of the rule on them. Enforcement of the rule cannot be said to be coercive, he said, since the members chose to join and become subject to it.

Member Leedom's dissenting opinion was that the members here were exercising their right under section 7 to refrain from union activity and that the fines were intended to force them to refrain from exercising that right. He also argued that the union conduct was not within the protection of the proviso of 8(b)(1)(A) since it was not merely an internal matter affecting the members as members, but was also an attempt to control production and wages affecting the employment of the members.

### Constitutional Law

*Racial Discrimination.* A Federal district court held <sup>5</sup> that the policy of a union and its apprenticeship committee to exclude Negroes was—at least passively—enabled to continue by Federal and State agencies, thereby depriving the Negroes of job opportunities and violating their rights under the Fifth and Fourteenth Amendments to the Constitution. The court ordered the union to accept Negroes into its training program and membership.

Three Negroes who had not been accepted into the apprenticeship program of an iron workers' union sued the apprenticeship committee, the union, a subcontractor, and several Federal and State agencies for alleged discriminatory denial of job opportunities in violation of the United States Constitution.

The contract under which the subcontractor undertook to do the steelwork on the building of a U.S. courthouse in Chicago contained clauses requiring nondiscrimination in hiring of employees. The iron workers' union, which had a collective bargaining agreement with the subcontractor as the sole supplier of its iron workers, had never had

a Negro member or apprentice. The union's apprenticeship program had previously been certified by the U.S. Department of Labor's Bureau of Apprenticeship and Training, and instruction under the program was given in facilities of the Board of Education of Chicago. The General Services Administration, a Federal agency, let the primary contract on the construction project.

A U.S. district court found that there was a systematic policy on the part of the union and its apprenticeship committee to exclude Negroes solely on the basis of their race. To support his opinion, he cited the fact that there had never been a Negro member or apprentice in the union, that the apprenticeship committee exercised its arbitrary discretion in selecting applicants, and that all other unions working on the construction project had Negro members.

The court ordered the apprenticeship committee and the union to certify two of the Negro plaintiffs (the other was unacceptable to the subcontractor for reasons unrelated to race) for training and to admit them to membership. The legal justification for so ordering, the court said, was that the Federal Government through two of its agencies, and the State through one of its agencies, at least passively enabled the union—a private organization—to realize and perpetuate its discriminatory practices, thereby violating the Fifth and Fourteenth Amendments. The judge reasoned that the equal protection clause of the Fourteenth Amendment would not permit the State, or the union acting under color of State authority, to discriminate against a race in the granting of job opportunities. The same would hold true under the Fifth Amendment's due process clause, which legally embraces the equal protection clause,<sup>6</sup> for the Federal Government and a union acting under color of its authority. Were it not for the "public body" assent, the opinion went on to say, the discriminatory practices of the union would not of themselves violate the Constitution. Here, however, union membership was an essential requirement and qualification to the plaintiffs realizing rights owed them by the Federal and State governments.

<sup>5</sup> *Todd v. Joint Apprenticeship Committee* (D.C., N.D., Ill., Oct. 16, 1963).

<sup>6</sup> *Bolling v. Sharpe*, 347 U.S. 497 (1954).

# Chronology of Recent Labor Events

## January 1, 1964

THE NEW YORK TRANSIT AUTHORITY reached agreement with the Transport Workers and the Street, Electric Railway Employees on terms of a 2-year contract providing about 29,000 workers an immediate 11-cent-an-hour wage increase and additional 8.5-cent increases on January and July 1, 1965. Seven cents was also to be allocated, beginning Jan. 1, 1965, to improve the welfare and pension programs. (See MLR, Feb. 1964, p. 193.)

CIVIL SERVICE COMMISSION regulations permitting Federal agencies to withhold union dues from paycheck of Federal employees on a voluntary basis became effective. To qualify, the union must have formal or exclusive recognition and a service charge of 2 cents for each payroll deduction will be assessed against the union.

## January 3

SECRETARY OF LABOR W. Willard Wirtz ruled that an amendment to South Dakota's unemployment compensation law was inconsistent with Federal law. The amendment would have denied benefits for a period ranging from 7 to 13 weeks to unemployed workers who earned more than \$6,000 during the base period. The Secretary held that this restriction amounted to a "means test" which was not intended by Congress as a criterion for receiving benefits.

## January 6

THE U.S. SUPREME COURT reversed rulings of State courts in three cases involving court jurisdiction:

In the first case, *Humphrey v. Moore*, the Supreme Court ruled that a union did not violate its duty of fair representation in supporting a decision made under the contract by a union-management committee to dovetail the seniority lists of two merged companies each previously represented by the same union. Federal and State courts were treated as having concurrent jurisdiction to hear the case, even though the unfair representation charge may have been within the jurisdiction of the NLRB. (See also p. 316 of this issue.)

On the same day, the Court held that even though a dispute may involve matters within the jurisdiction of the NLRB, a union representing production and maintenance workers may bring a suit in a State court to compel arbitration of grievance over work assignments. The company

had argued the dispute was a representation matter within the Board's exclusive jurisdiction. The case was *Carey v. Westinghouse Electric Corp.*

SECRETARY OF LABOR W. WILLARD WIRTZ issued new Davis-Bacon Act provisions affecting wage regulations on Federal construction projects. Beginning Feb. 3, 1964, a Wage Appeals Board consisting of three public members will hear objections to wage determinations and rulings. The provisions also extend from 90 to 120 days the duration of wage determinations, establish a 10-day period prior to opening project bids during which no changes in wage determinations may be made and change disbarment and reinstatement procedures.

## January 13

THE U.S. SUPREME COURT held that even if conferred permanently and unconditionally, the announcement of benefit increases at a critical time prior to a representation election had the effect of influencing an election outcome and thus violated employee organizing rights under the Taft-Hartley Act. The case was *NLRB v. Exchange Parts Co.*

## January 14

THE LADIES' GARMENT WORKERS reached agreement with employers in the children's dress, infants' wear, house-dress, and bathrobe industries on a 3-year contract providing more than 20,000 workers in New York City and other eastern areas a \$3-a-week wage increase for time-rated employees and a 5-percent increase for pieceworkers. (See also p. 322 of this issue.)

## January 15

THE Ladies' Garment Workers and Bobbie Brooks, Inc., announced establishment of a continuing joint study committee to recommend solutions to long-range labor relations problems and insulate bargaining from crisis pressures. (See also p. 322 of this issue.)

## January 16

POLICY COMMITTEES of Trucking Employers, Inc., representing 1,000 large trucking firms, and the Teamsters approved a 3-year national agreement effective through Mar. 31, 1967, providing 400,000 workers wage increases of 10 cents effective on the varying dates of expiration of regional contracts, 8 cents on Mar. 31, 1965, 10 cents on Mar. 31, 1966, and cost-of-living adjustments in February 1966, and March 1967. Employers also agreed to a \$5-a-week-increase per man to the pension and welfare funds over the 3-year period and reduced eligibility for 4 weeks' vacation from 18 to 16 years.

**January 17**

THE National Labor Relations Board held that a union did not unlawfully restrain or coerce employees by fining members under an agency shop agreement whose piece rate earnings exceeded the ceiling set in 1938 by the union, since internal discipline not affecting a member's status as an employee was not among restraints encompassed by the Taft-Hartley Act's ban on coercion. The case was *Local 283, United Automobile Workers (Wisconsin Motor Corp.)* and *Russell Scofield*. (See also p. 317 of this issue.)

**January 18**

OFFICERS of the 40,000-member Lithographers Union (Ind.) and the 20,000-member Photo-Engravers' Union (AFL-CIO) announced membership approval of plans to form a merged Lithographers and Photo-Engravers' Inter-

national Union (AFL-CIO) headed by Kenneth J. Brown, now president of the Lithographers. A joint convention will be held May 24 to adopt a constitution, but Lithographers New York Local 1 with 8,700 workers and two-thirds of the union's assets announced plans to become an independent union. (See also p. 324 of this issue.)

**January 23**

THE National Maritime Union, the Marine Engineers Beneficial Association, and the American Merchant Marine Institute agreed on a procedure for resolving conflicts resulting when an arbitration decision under either union's agreement affects rights and obligations of members of the other. Under the new mechanism, standing arbitrators for both unions may be authorized to resolve such conflicts, and if this should fail, a third arbitrator or the American Arbitration Association may be called in.



# Developments in Industrial Relations\*

## Wages and Benefits

*Trucking.* Regional local cartage and over-the-road trucking agreements were made supplemental to a "national" trucking contract under a settlement reached on January 16 by the Teamsters and Trucking Employers, Inc.<sup>1</sup> The increase in hourly employment costs to the truckers by the end of the 38-month contract period was estimated by Teamster President James R. Hoffa at 45 cents—slightly higher than the reported cost of the 1958 and 1961 settlements for the Central States. The 1958 Central States settlement provided semiannual cost-of-living escalator adjustments during the life of the contract and the 1961 agreement provided adjustments in both the second and third contract years rather than two adjustments in the final 14 months, as under the new agreement. Cost-of-living escalator increases totaled 9 cents under the 1958 contract and 5 cents under the 1961 contract.<sup>2</sup> A 6-cent-an-hour increase in the cost-of-living allowance would have been due in February 1964 if the provisions of the escalator clause of the previous contract had been continued.

The new contract terms are set forth in one master agreement with area supplements for local cartage and over-the-road firms employing upwards of 400,000 workers.

The contracts provide for general wage increases of 10 cents an hour the first year, 8 cents the second, and 10 cents the third year for local cartage employees and a ¼-cent increase in mileage rates for over-the-road drivers in each year—each reportedly equivalent to an average of about 10 cents an hour. Owner-drivers of leased equipment received a 1-cent increase in their mileage rates. The master agreement and the area supplements have a common termination date—March 31, 1967, but the effective dates of the wage-rate

increases vary according to the expiration dates of the agreements being replaced.

The settlement incorporated existing cost-of-living allowances into base rates and provided a revised escalator clause with two adjustments—one on February 1, 1966, and one on March 31, 1967. The revised formula provided for a 1-cent-an-hour adjustment for each of the first three 0.3-point changes in the BLS Consumer Price Index above its June 1965 level and 1 cent for the next 0.4-point change in the index; then the pattern of three 0.3-point brackets, and one 0.4-point bracket is repeated; stated differently, for each full 1.3-point change in the index the cost-of-living escalator allowance will be increased 4 cents.

In addition to across-the-board increases, there was provision, as in previous contracts, for narrowing area- or type-of-truck differentials in local cartage wage scales. Reportedly among the largest groups of workers to receive such extra pay increases will be straight truckdrivers in the northern New Jersey area, who will receive an additional 10 cents an hour in September 1964 to bring their rates up to those of tractor-trailer drivers in the area; drivers in upstate New York will receive 9 cents an hour on August 1, 1964, with an additional penny to go into the area health and welfare fund, which was previously less liberal than that in effect for the Central States. All truckdrivers whose scales were below the Indianapolis level will receive an additional 1 cent an hour on February 1, 1965.

In most areas,<sup>3</sup> the employers also agreed to increase their payments to health and welfare funds by \$3 a week over the contract term, and pension

\*Prepared in the Division of Wage Economics, Bureau of Labor Statistics, on the basis of published material available in early January.

<sup>1</sup> All regional agreements, except those in the New England States which do not expire until 1967, and in the State of Virginia were replaced by the new agreement, but Teamster locals in two areas—Chicago and 5 of the 14 locals in the metropolitan New York area—were not covered by the national agreement. The Chicago locals signed area agreements similar to the national agreement but New York locals did not conclude settlements. Existing New England contracts provided for matching the terms of the national agreement. Primarily, the national agreement is limited to common carriers and does not cover construction drivers, milk, and bakery drivers, etc.

<sup>2</sup> Of the 5-cent total under the 1961 contract, 2 cents was diverted to the health and welfare fund.

<sup>3</sup> In the northern New Jersey area, increases for health and welfare will be only 50 cents a week the first and second years; truckers in central Pennsylvania will not receive the \$1.50 weekly payment in health and welfare due the second year; other areas will also vary depending on the current payment schedules.

funds by \$2—a total of \$5 a week. The increases will be \$1 the first year, \$1.50 the second, and 50 cents the third, for health and welfare and \$1 in the first and third years for pensions. Reciprocity arrangements are to be made among the various area pension funds for workers switching jobs among areas. In addition, employers agreed to a 12-month rather than a 6-month continuation of contributions to the funds for workers injured on the job.

Other benefits included 4 weeks' vacation after 16 instead of 18 years' service; an increase of \$1 a day in lodging rates which typically were \$3 a day—though some agreements provided up to \$7.50; an increase of 25 cents in meal allowances which typically were \$1.25; improved layover pay provisions for sleeper cab operators and \$11 increases in their vacation pay to \$226 a week in 1966.

Other provisions included assurances that all dormitories in new trucking terminals will be soundproofed, air conditioned, and equipped with shower or bath. Lodging provided by the employer may not have bunk or double beds, and mattresses must comply with width and depth specifications. To halt "moonlighting," employers may not employ anyone who is regularly employed elsewhere, with a double-time penalty after the employer is notified that the worker is so employed. Decertification vote provisions were made more stringent. Drivers are to be protected against discipline for refusal to cross picket lines established by other Teamster locals. Other conditions are to be negotiated in the local supplementary agreements. An independent trucking union of 10,000 members in the Chicago area was not a party to the agreement.

*Manufacturing.* In the children's dress, infants' wear, housedress and bathrobe industries, a 3-year agreement was reached January 14 for 10,000 workers represented by Local 91 of the International Ladies' Garment Workers' Union in the New York City area and an additional 10,000 in other eastern areas. It provided for a \$6-a-week increase in wage rates for cutters, retroactive to January 1, 1964, a \$3 increase for other week-workers, and a 5-percent increase in pieceworkers' earnings effective March 1. A second week of paid vacation was provided, to be financed by an em-

ployer contribution of 2 percent of payroll. Craft minimums were increased, with the cutter minimum raised by \$10 a week. A wage reopener is provided for the second year of the 3-year contract.

Bobbie Brooks (reportedly the Nation's largest sportswear manufacturer) and the ILGWU, representing 7,000 workers in the company's 17 plants and 60 contracting shops in 11 States, established a continuing labor relations committee to consider and recommend solutions for labor relations problems. In addition, David L. Cole was appointed to a new position of permanent impartial chairman under the grievance procedure and he will serve as ex-officio member of the committee. The president of the company stated that the company was seeking new production systems and wanted to have a mechanism for discussion of such changes with the union.

The New York Lamp and Shade Manufacturers Association, Inc., representing 140 firms in the New York City metropolitan area, and Local 3 of the International Brotherhood of Electrical Workers, which represents 3,000 workers, agreed on a \$3-a-week wage increase effective December 16 and another \$3 in the next contract year. A \$1.50-an-hour minimum hiring rate was also provided in the new contract. (Negotiations in January 1962 had resulted in a 39-hour workweek.)

The Sun Shipbuilding and Dry Dock Co. of Chester, Pa., agreed January 5, 1964, on a 3-year contract with the Boilermakers Union for about 2,500 employees, providing an immediate 7-cent-an-hour pay increase and a 6-cent-an-hour increase in each of the remaining 2 years of the contract. The rate for first-class mechanics under the previous contract was \$3.09. Severance pay was increased by \$100 for employees with 15 to 25 years' service and by an additional \$300 for those with 30 years' service, bringing the maximum to \$2,000; and the company assumed the full cost of life insurance for retirees (formerly the cost was shared). A ninth paid holiday was added and a day's funeral leave was established.

An agreement providing an increase in wages and benefits was announced by Armour & Co. and Local 515 of the Amalgamated Meat Cutters and Butcher Workmen for the approximately 500 employees of the Memphis Packing Co. in Memphis, Tenn. Benefits include a 6-cent-an-hour wage increase effective January 6, with the night shift

receiving an additional 6 cents. In addition, the workers will receive 3 paid holidays—July 4, Thanksgiving, and Christmas.

In August 1962, when the union agreed to a substantial reduction in wages and fringe benefits to enable the plant to continue operation, the company had stated that it would offset—as soon as possible and to the extent possible—the reductions in wages and benefits the union had accepted.<sup>4</sup> The plant manager said that the current increases in wages and benefits were made possible by improvements in facilities and equipment and an increase in worker productivity during the past year.

Employees of the Muskegon, Mich., plant of Continental Motors Corp., a manufacturer of automobile engines, represented by the United Automobile Workers agreed to forego wage increases of 4 to 8 cents an hour due to go into effect February 2, 1964, under a contract ratified in March 1962. About 4,500 workers are affected. A union spokesman said that the workers had decided on this action to maintain the company's competitive position and to help in its modernization program. In February 1961, the workers had voted a 6-month postponement of a 2-cent cost-of-living increase to help the company compete for an Army contract.

General Motors Corp. announced that \$94.5 million in company stock, Government bonds, and cash was distributed in 1963 to 58,800 of its salaried employees, participants in its savings-stock purchase program. According to Frederic G. Donner, chairman of the company's board of directors, the distribution amounted to \$3 for every \$1 invested by the employees in 1958. It was computed on current employee holdings in the plan, which consisted of \$30.4 million in employee savings during 1958, \$15.2 million from a 1958 company contribution, appreciation in the value of company stock in the fund, and accumulated dividends and interest. The plan went into effect on October 1, 1955.

In January, the Masonite Corp., and the International Woodworkers of America signed a 1-year contract covering 3,000 workers at its Laurel, Miss., plant, which provided no increase in wage rates but improved pensions, insurance, and other

supplementary benefits, at a cost reportedly equivalent to a 3-percent wage increase.

*Other.* Wage increases averaging 3.09 percent were agreed to on December 18 for about 10,700 trades and labor employees, following a joint wage conference between the Tennessee Valley Authority and the Tennessee Valley Trades and Labor Council, consisting of 16 unions. Annual increases ranging from \$120 for laborers to \$180 for carpenters were effective December 29 for 4,800 operating and maintenance employees; hourly increases ranging from 7½ cents for lathers to 15 cents for boilermakers were effective January 4 for about 5,900 construction workers.

The American Federation of Musicians signed a 5-year agreement with record companies that reallocated half the royalties that had formerly gone into the musicians' performance trust fund to the musicians actually making the records. Formerly, all the musicians' royalties had been used to provide employment for musicians giving admission-free concerts in parks, hospitals, and other institutions. In recent years, the total fund had amounted to about \$6 million annually.

The contract also increased the fee for a 3-hour recording session to \$61 from \$56 on January 1, 1964, with a further increase to \$65 on January 1, 1967. Other benefits included premium pay for Sundays, holidays, and after-midnight sessions.

The executive board of the Steelworkers announced January 24 that it had increased the pay of its 1,100 field and clerical employees by 10 percent retroactive to January 1. This was the union staff's first general increase since 1956.

## Other Developments

*Pending Negotiations.* Proposals for higher penalty rates for daily overtime and work on weekends were incorporated in the demands for forthcoming automobile negotiations adopted by the United Automobile Workers' skilled trades conference at its meeting in Chicago toward the end of January. The conference adopted a resolution calling for the elimination of contract requirements that workers accept overtime work if ordered to do so. In addition, the conference proposed double-time pay for all work in excess of the first 2 hours of daily overtime and triple

<sup>4</sup> See *Monthly Labor Review*, December 1962, p. 1402.



pay for any additional work. Double time would apply to all work during regular hours on Saturday, with triple time for work in excess of normal hours on Saturday and all work on Sundays and holidays.

*Union Merger.* Members of the independent Amalgamated Lithographers of America and the International Photo-Engravers' Union of North America approved merger of the two unions. The Lithographers approved the merger by a vote of 18,434 to 13,013 and the Photo-Engravers' by 8,715 to 4,611, but locals of both unions in New York City voted against the merger, with the Lithographers local reportedly opposing it by 7,674 to 60 and the Photo-Engravers' vote running 1,634 to 977 against the proposition.

The new union will be called The Lithographers and Photo-Engravers' International Union and will be affiliated with the AFL-CIO. The Lithographers had left the AFL-CIO in 1958. A merger convention will be held in Minneapolis in May to adopt a constitution.

*Government Rulings and Court Decisions.* The Department of Labor issued new regulations affecting the determination of minimum wages on federally controlled construction projects of \$2,000 or more. The regulations resulted from 1962 congressional hearings on the administration of the Davis-Bacon Act, under which the Labor Department determines minimum wages to be paid on federally controlled construction contracts. They established a 3-man appeals board to hear objections to interpretations of the law or to wage determinations and extended the duration of wage determinations to 120 days, from 90 days.

A North Carolina State minimum wage of 85 cents, from 75 cents, effective January 1 resulted

in increases for about 25,000 workers according to the State's labor commissioner. The increases were made under an amendment to the State's minimum wage law passed by the General Assembly in 1963. The rates apply to establishments employing four or more workers in any pay period.

The U.S. Court of Appeals in New York City on January 28 ruled that the Publishers' Association of New York City was not guilty of unfair labor practices in locking out its nonstriking employees in the 114-day newspaper strike-lockout in 1962-63.<sup>5</sup> The decision upheld an order of the National Labor Relations Board dismissing a complaint by Local 6 of the Mailers' Union and stated that since the majority of the unions bargained jointly with the Publishers' Association, the lockout of nonstriking employees was a legal defensive measure.

U.S. District Judge Alexander Holtzoff in Washington, D.C., on January 8, upheld the award<sup>6</sup> of the railroad arbitration panel set up by Congress on August 28, 1963.<sup>7</sup> In his ruling, Judge Holtzoff also held that the Congress had the constitutional power to order arbitration. The award and the power of Congress to order arbitration had been challenged by 4 of the 5 operating brotherhoods. The Order of Railway Conductors and Brakemen did not join in the challenge. Judge Holtzoff's ruling was appealed to the U.S. Court of Appeals and oral arguments were scheduled for January 30 or 31. Late in the month, two of the unions—the Brotherhood of Locomotive Engineers and the Brotherhood of Locomotive Firemen—agreed with the railroads to delay application of the award on firemen until 10 days after the court of appeals issued its ruling.

<sup>5</sup> See *Monthly Labor Review*, May 1963, p. 555.

<sup>6</sup> See *Monthly Labor Review*, January 1964, pp. 70-71.

<sup>7</sup> See *Monthly Labor Review*, October 1963, p. 1201.

# Book Reviews and Notes

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## What Shop Stewards Believe

*The Rank-and-File Leader.* By Sidney M. Peck. New Haven, Conn., College and University Services, Inc., 1963. 398 pp. \$6.

The author has gone to the source to get information on attitudes of rank-and-file union leaders. In a study of 184 shop stewards from 16 different Milwaukee area union groups, he has collected opinions on such topics as the role of the steward, corruption in unions, Negroes, Jews, working women, juvenile delinquency, economic policy, technology and automation, war and peace, and labor political action.

Using the device of a tape-recorded statement from a fictitious German visitor (The "Mueller Report") to stimulate discussion, the author has recorded steward reactions and played many of them back in this book, which is also sprinkled with some of his views accumulated in 4 years of work in various industrial plants in the Milwaukee area.

Whether or not the same results could have been elicited by more direct means, the viewpoints are fresh and interesting if somewhat redundant in spots. Moreover, taken together, they serve to challenge some accepted canons about mass (and classless) society in America, about the "job-conscious" theory of the labor movement, and even about the direction in which labor education should be moving.

The basic conclusion is that the steward reflects without question a "consciousness of kind" or class consciousness, a "we" and "they" attitude towards all questions discussed. This leads him to discount corruption in unions as a device of antiunion forces and to rally round his union leadership even more firmly. It leads to "solidarity" feelings and effective representation for Negroes and women, even while the steward may

harbor mild-to-strong prejudices, and it is an attitude consistent with some expressed anti-Semitic feelings.

The stewards feel that "they" control economic life, even down to ordering recessions, and that technology and automation are fearsome forces that cannot be stopped but somehow must be controlled. On the subject of war and peace, the stewards are strongly against a nuclear war, believe that coexistence is possible, but have no program for dealing with these matters and "would rather not think about it."

They reject, almost out of hand, independent labor political action and socialist programs for social and economic change; in fact, "only a few stewards openly advocate broad social and economic planning." The striking exception is socialized medicine, where these stewards seem prepared to go much further than current proposals. The author concludes that, while socialist ideology is clearly not in their scheme of things, neither is the "job-consciousness" description big enough to hold what they feel and believe, which the author describes as class-conscious or social unionism. In this, he offers an amendment to Perlman.

What are the implications for unions? The stewards know that their role, despite what they are being told constantly, has diminished in many cases to the processing of unimportant grievances. The author seeks ways to wed the political spontaneity of a meeting to ratify the union contract with the whole gamut of social union goals and sees the stewards as the ones who can bring off this marriage. He suggests the stewards as the base for a massive education program (in the shop and on "company time" as actual working hours are reduced) to articulate union goals and programs.

There are problems here. Is it an accident that the high point of "political spontaneity" is the contract-ratification meeting? And doesn't this bespeak a firmer place for job consciousness than the author allows it? Is the political stalemate in the country as a whole not related to problems in union political action? Can the steward carry this job, even if it were given to him and the workers would respond?

But problems aside, it is apparent from this study that stewards are ready for more than has yet been put before them. If "industrial union stewards do not present a consistent, rational, ide-

ological assessment of critical social issues," as the study concludes they do not, then the work of union education has only just begun, since the solution of these issues will be crucial for unions, as well as for society, in the years ahead.

Though the author takes a long windup before he delivers the first pitch, he has presented the freshest material of its kind since the "Seidman group" at Chicago did their field studies for *The Worker Views His Union* published in 1958.

—RUSSELL ALLEN

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### On "Vexing" Pension Problems

*Collectively Bargained Multiemployer Pension Plans.* By Joseph J. Melone. Homewood, Ill., Richard D. Irwin, Inc., 1963. 191 pp. \$6.

This is one of a series of pension studies issued by the Pension Research Council of the Wharton School of Finance and Commerce. The purpose of the Council is to promote and sponsor broad research and interpretive studies of the private pension mechanism.

Collectively bargained multiemployer pension plans are an important and distinctive element of the private pension structure. Besides controlling large sums of money, the union-management boards administering these plans are responsible for developing provisions affecting a sixth of the workers in private pension plans. Dr. Melone's analysis of the nature, problems, and issues of negotiated multiemployer pension plans is therefore a significant and timely contribution to an understanding of modern private security measures.

The volume's chief merit lies in unifying the analysis of factors unique to multiemployer plans. In addition, it presents some new insights into the nature of the problems inherent in these plans. The first chapter deals with their historical and economic framework and development. The second covers such basic benefit and administrative features as retirement ages, benefits, voting and quorum rules, and claims processing.

Chapters on the vexing financial and actuarial problems inherent in multiemployer plans are perhaps the author's noteworthy contribution. Since it is commonly held that unions tend to dominate the operation of these plans, the examination of their funding and investment policies as compared to single-employer plans is quite meaningful. Although, for example, the entire picture of the assets of multiemployer plans is unclear at present, the author's analysis of data he obtained for a large selection of plans shows that investment policy differs radically by type of administrator. He found that multiemployer funds administered by corporate trustees follow the investment patterns of single-employer plans, which are usually administered by corporate trustees. On the other hand, funds directly administered by joint union-management boards are more heavily invested in government bonds and real estate loans and investments. The actuarial problem of equating fixed contributions and fixed benefits, the implications of "actuarial soundness," and other issues are also examined in detail. The common concern that where the unions control the plans they may seek high benefit levels at the expense of the soundness of the plan is given extensive treatment.

The author draws attention to the legal aspects of delinquent contributions, collection, and rights of employees in case of termination of the plan or employer which are of special importance in connection with a pension system characterized by high employee and employer turnover. An interesting case study of a large plan that was terminated is accorded lengthy treatment. In addition, there is a brief analysis of the question of whether the noninsured plans are engaging in an insurance operation. There is also a brief discussion of Federal and State legislation affecting the establishment and operation of private pension plans, with special emphasis on the relationships to multiemployer plans.

The volume is suitable both to persons directly engaged in the operations of multiemployer plans and to students interested in the workings of multiemployer plans. It also provides a useful guide for further research in this area.

—WALTER W. KOLODRUBETZ

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## Double Challenge

*Challenge to Affluence.* By Gunnar Myrdal. New York, Pantheon Books, 1963. 172 pp. \$3.95.

For Myrdal, there are two interrelated challenges facing America: a slow rate of economic growth (expressed as about 1 percent per capita per annum) and continuing widespread unemployment (expressed as 9 percent when underemployment and discouraged withdrawal from the labor market are included). In part, both arise from an inadequate volume of effective demand. But there is also the structural character of unemployment and the employed which affects not only the extent of unemployment but also the total growth rate. Here the analysis includes familiar technological and demographic classifications and the usual identification of unwanted workers—the untrained young, the unskilled adults, those with obsolescent skills, and those rejected by employers because they are Negroes or are old.

Myrdal shows the vicious circle perpetuating the poverty of the unemployed. An uncontrolled economic system increasingly dooms them as an “under-class” who are alienated from their society while the affluent culture increasingly accepts this stratification and no longer cares. For this “under-class,” the American dream is fading rapidly. This chronic problem now has special urgency as the rate of technological change exceeds the generation-long rate of change in the character of the labor supply.

Myrdal's remedy includes a vigorous governmental effort to expand effective demand, for without it there is little hope of effecting structural change. But an undirected expansion of effective demand will soon be blocked by labor bottlenecks that can only result in inflation. A more appropriate expansionist program would focus on “vigorous efforts within the American Nation to induce greater equality of opportunity and of standards of living.” Thus, economic reform and social reform would be combined in direct attacks on poverty and in the expansion of public services which would contribute to the development of the skills and motivations of the “under-class.” Such a program requires long-range planning, for the changes can only occur gradually. Myrdal hopes such planning can reduce much of the detailed governmental supervision over the economy, and establish general guides to integrate demand with

the needed structural correctives. This program depends upon enlarged governmental action because the major economic interests are not balanced. Strong protective organizations exist for business men, for unionists, and for large farmers. But the disadvantaged cannot protect themselves.

For Myrdal, this repudiation of drift and call for massive governmental action focused both on enlarging demand and reducing structural deficiencies happily makes both ethical and economic sense. It is not only that the analysis hangs together. It is also that the prescription can be expected to appeal to the idealism as well as the economic prospectives of Americans.

As an appendix, Myrdal includes the commencement address he made to Howard students in which he urged them to prepare for a brighter—and a more integrated—future. There is a nominal inconsistency between this optimism and the gloomy predictions of a future that can be expected from the continuation of present tendencies. However, within the volume is the deeper consistency of a friend who believes the American ideal will guide us to more affirmative actions.

—W. ELLISON CHALMERS

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## For Inexperienced Bargainers

*Strategy in Labor Relations.* By Stephen F. Byrd. Waterford, Conn., National Foremen's Institute, Bureau of Business Practice, 1963. 151 pp., bibliography.

Labor has always lacked suitable materials for its classes on negotiating and, ironically, this need has been filled by a company industrial relations expert in this small volume.

This book is an invaluable aid to inexperienced labor relations men—covering ethics, manners, strategy, and law. Manners might seem like an inconsequential aspect of labor relations, but if the following advice were taken seriously, considerable distress could be avoided:

To sum it all up: Enter bargaining negotiations stripped of all prejudices, fright, and anger. Otherwise, management embarks upon one of the most fateful relationships in its life with every probability of failure.

The sections on law are designed to establish permissible parameters for management behavior,

but in no sense are they designed to lead to evasion or manipulation. This chapter is judicious and thoughtful.

The chapter on Safeguarding Management Rights might sound ominous to a unionist. However, the unions' position is reasonably presented, and the motivation for their position is explored. The approach to the delicate problem of conflicting goals in the negotiating process is to recognize that each has an interest to maintain and advance and that both are served best by recognizing what those goals are.

This reviewer confesses that he would have had an easier job as a union representative if the intelligence afforded by this book were available to him at that time. It certainly would have been a pleasanter experience if the labor relations men had also been privy to this sound position.

—WILLIAM GOODE

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### **"Social Invention and Experiment"**

*Labor, Management, and Social Policy: Essays in the John R. Commons Tradition.* Edited by Gerald G. Somers. Madison, Wis., University of Wisconsin Press, 1963. 303 pp. \$6.

Ten essays, written by members of the economics and law faculties of the University of Wisconsin for the 1962 centennial of the birth of John R. Commons, constitute a tribute to the insights, vitality, and accomplishments of a remarkable figure in American economics. These essays by and large hew to the Commons' tradition of a sympathetic yet scholarly approach to the position of the worker in an industrial society, of an awareness of the complexities of a market system that to be understood must be investigated empirically, and of a willingness to seek remedies through "social invention and experiment."

As Kenneth Parsons points out, Commons was concerned with power, both economic and political, and showed how power could be curbed through collective action to create a "zone of freedom and discretionary action" for the individual. While the value of Commons' documentation of one such form of collective action—unions and collective bargaining—is, of course, immeasurable, his theories of unionism are essentially pluralistic.

In the essays of Robert Ozanne and of L. Reed Tripp, in which Commons' theories are defended, it is clear that the extension-of-market theory of union growth and the Commons-Perlman theory of job-consciousness and job-control have to be reinterpreted and revised "in the modern context," as Tripp admits.

More in keeping with Commons' empirical and nondeductive approach is Jack Barbash's analysis of the AFL-CIO. He shows how the federation has gone a "long way from classical Gompersian voluntarism" in its support of the public interest even when contrary to the interests of affiliates, creating in the process some serious internal strains. The new problems of reconciling private and public interests in labor-management relations are also explored by Nathan P. Feinsinger with his discussion of the role of private neutrals and public study commissions.

In the area of social and labor legislation, where the "linkage of scholarly inquiry to public policy formation" was so fundamental to Commons' thinking and action, Arthur J. Altmeyer traces the impact of Commons on social security legislation and goes on to evaluate the present status of the law.

Shifting more to an appraisal of present legislative inadequacies and to proposals for future action, both Abner Brodie's essay on workmen's compensation laws and David B. Johnson's evaluation of the "outdated" Davis-Bacon Act deal with current, controversial issues.

Finally, there are two essays that underscore the present need for social invention to meet new problems. Of special interest is the essay of Elizabeth Brandeis that analyzes the institutional defects of the unstructured labor market of migratory farm labor in Wisconsin that have created a no man's land outside the protection of the usual social and labor legislation and pose a real challenge to intelligent and effective action. Similarly, the essay of Gerald G. Somers on problems of structural unemployment and the Area Redevelopment and the Manpower Development and Training Acts points to the new issues of labor market policy and the desirability of broad regional planning.

—EVERETT J. BURTT, JR.

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## Public Policy in a Private Economy

*The Managed Economy.* By Michael D. Reagan.  
New York, Oxford University Press, 1963.  
288 pp. \$6.

Brevity does not permit justice to Professor Reagan's discussions of "Property, Power, and American Political Thought," "The Public Role of the Private Corporation," and "Government: The Visible Hand," each of which serves as a heading for the first three of four groups of chapters. However, both the premises and the general outlook of the book are suggested by the fact that its index cites the name of John Kenneth Galbraith nine times and the name of no other professional economist more than three times.

The most interesting part of the book is its last section, entitled "The Political Economy of the Future," which presents a variety of suggestions for increasing the effectiveness of public policy in a society of growing private economic power. The suggestions include the following: (1) government-business cooperation to deal with problems of full employment, needed investment, economic growth, and price stability, including, for example, semiautomatic changes in corporate tax rates; (2) greater policy unification of existing regulatory commissions and agencies, including the Federal Reserve Board; (3) revision and improvement of the executive-legislative relationship and of the executive machinery for the formulation and administration of economic policy, including transforming the Council of Economic Advisers into a nucleus of an Office of Policy Planning and restructuring certain congressional committee functions pertaining to economic matters; (4) specific measures relating to business firms, such as Federal incorporation of the 200 largest corporations, with charter restrictions on conglomerate mergers and required establishment of public review boards by each corporation, and elimination of tax exemption for corporate lobbying expenses and for cultural, educational, and charitable contributions; (5) the creation of an "institutional locus" for the analysis of problems of manpower and industrial location, especially those associated with automation.

Professor Reagan's suggestions, summarized incompletely above, are intended as a basis for a program that would involve a "general restructur-

ing of the governmental and political system" in order to strengthen the government's capacity for central policy planning as an essential device countervailing private business planning. Such planning would anticipate problems before they reach crisis proportions and would frequently take the form of inducements rather than directives.

It would be easy to characterize certain of the author's assertions and recommendations as incomplete or even naive, but in its overall impact, *The Managed Economy* is an effective antidote to prosperity-induced complacency.

—FRANCIS S. DOODY

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## From Freud to Mayo

*Motivation and Productivity.* By Saul W. Gellerman. New York, American Management Association, 1963. 304 pp. \$9; \$6 to AMA members.

An author who attempts to summarize the significant research in a field, present it in a coherent whole, and then block out the "practical implications" promises much and should be judged accordingly. Saul W. Gellerman, of the IBM World Trade Corporation, purports to do this in the area of productivity and motivation. Or, as the dust jacket succinctly puts it, the book aims to assist management in increasing individual productivity.

The analysis proceeds on three levels: First is a review of some of the major efforts in the field of human relations. Mr. Gellerman reviews the works of Elton Mayo, some research from the University of Michigan, a study of Psychological Services of Pittsburgh, and works of Abraham Zaleznik of Harvard, William F. Whyte at Cornell, and Douglas McGregor from the Massachusetts Institute of Technology.

Second is "the motivated individual"—the major theories of human motivation. Here he discusses Freud and Adler, Robert White of Harvard, Stanley Schacter of the University of Minnesota, David McClelland of Harvard, and James E. Abegglen of Chicago. Finally, there is a chapter on money and motivation which appears to be the doing of the author.



Last is "a broad theory" which incorporates such matters as the diversity and fleeting nature of motives and the role of the self and the environment in the development, conception, and impact of motives on human behavior. The concluding chapters discuss practical implications in terms of leadership, recruitment, labor relations, and morale.

Such, with little justice to details, is the broad sweep of the book. What is its import? First, it is easily read and devoid of jargon. Some of the very best in it is not the rehashing of Elton Mayo and others but Mr. Gellerman's own interpretive conclusions. The perspective is that of the decisionmaker in industry. The author understands well the problems and priorities faced by management, especially in dealing with the blue-collar worker.

It strains one's credulity to accept the claim that we are shown "how the results of the studies analyzed here" can be applied to increase productivity. But if nothing else, the author does discuss in an intelligent and thoughtful manner the major points of view in dealing with productivity on the job.

—JOHN W. McCOLLUM

U.S. Department of Health, Education, and Welfare

## A New Casebook

*Cases and Materials on Workmen's Compensation.*

By Wex S. Malone and Marcus L. Plant. St. Paul, Minn., West Publishing Co., 1963. xxxv, 622 pp. (American Casebook Series.) \$12.

Wex S. Malone, professor of law, Louisiana State University, and Marcus L. Plant, professor of law, University of Michigan, have made available a casebook on workmen's compensation law that should be welcomed by teachers and students on this subject. The book is mainly a collection of court cases that clarify and support the statements of principles that are found in most workmen's compensation statutes. The cases are supplemented by a considerable amount of narrative material which helps to place them into proper perspective.

The authors discuss the situation that exists today in the 50 American jurisdictions with regard

to the employer-employee relationship, accidents arising out of and during the course of employment, proof of causation, and occupational diseases. In addition, the book furnishes valuable information pointing up the condition that existed just prior to the advent of workmen's compensation legislation in the United States. Along with the discussion of the common law principles, the authors also go into the theory of compensation legislation. The narrative material and cases adequately explain this phase of workmen's compensation theory.

Instruction in workmen's compensation legislation is now commonly given in many American universities, but there has been a dearth of text material on this subject. It is recognized that it is impossible to collect the law of workmen's compensation in one volume, but this should not disappoint the students of the subject. Although the book has certain shortcomings, it contains a considerable amount of information which is not easily accessible elsewhere, and many will be grateful for this. The authors, in fact, mentioned in their preface that the greatest shortcoming is the inability to keep a text such as this up to date. They also recognize the difficulty of covering the situation in all States adequately, pointing out the need for use of materials and cases relating to the local jurisdiction. It is to be regretted that in a textbook directed to law students, only a passing reference is made to the problem of regulating the fees to be charged by claimants' attorneys.

—DONALD L. REAM

Workmen's Compensation Adviser  
Bureau of Labor Standards

## A New Edition

*Disability Evaluation: Principles of Treatment of Compensable Injuries.* By Earl D. McBride. Philadelphia, J. B. Lippincott Co., 1963. xiv, 573 pp., bibliography. 6th ed. \$22.

"The purpose of this volume," Dr. McBride wrote in the 1936 preface to the first edition, "is to interpret the physiological and mechanical alterations arising out of injury to the motor struc-

ture of the human body, and to reasonably appraise and evaluate the extent of functional loss as it relates to the economic incapacity of the injured." Since all workmen's compensation systems assume that objective measures of economic loss can be inferred from measured permanent impairment and pay benefits in relation to it, the importance of Dr. McBride's task is readily evident.

It is primarily to the doctors who must do this measuring that Dr. McBride addresses his book. Part primer on the compensation laws and their requirements, mostly treatise on industrial medicine, the book is aptly subtitled "Principles of Treatment of Compensable Injuries." The volume is replete with illustrations, and throughout 38 chapters Dr. McBride manages to maintain a fresh, simple, prose style and an optimistic view of his task.

Measuring physical incapacity is difficult enough; translating physical incapacity into an acceptable determination of economic incapacity is far more troublesome. There are simply too many factors bearing on recovery that do not lend themselves readily to measurement and which are influenced by the compensation process itself. In recent years, these have gained in importance and, as a result, it is no doubt true that compensating permanent disability has become no easier in the 28 years since the first edition of this important volume appeared. Yet, our debt to Dr. McBride is nonetheless great, for his efforts to bring order and scientific ratings to a complex medical-legal field have been widely followed and among many of the professionals involved in the rating process, his book is in frequent use.

In this sixth edition, Dr. McBride has revised some of his earlier ratings and brought up to date the material on evaluation and rating physical impairment. The introductory chapters which survey the field, the law, and the doctor's role in it, however, as well as the concluding material on employment of disabled persons are still somewhat dated.

—EARL F. CHEIT

Professor of Business Administration  
University of California (Berkeley)

## Dramatic Episode

*A History of the Los Angeles Labor Movement, 1911-1941.* By Louis B. Perry and Richard S. Perry. Los Angeles, University of California, Institute of Industrial Relations, 1963. 622 pp., bibliography. \$10.50, University of California Press, Los Angeles.

This is a readable, well-documented story which should get attention from others than just the specialists or the participants who want to recall fondly, or with anger, a dramatic era.

The 1910 bombing of the Los Angeles Times building by the McNamara brothers set the stage for a prolonged, bitter fight against unionism in Southern California, a fight which is described with commendable objectivity in this book.

This is the second of a planned series on labor in Los Angeles. The first was Grace Heilman Stimson's *Rise of the Labor Movement in Los Angeles*, which, like the present volume, was commissioned by the Institute of Industrial Relations at the University of California at Los Angeles. The Stimson story goes through the time of the bombing, an event both volumes dramatically use to emphasize the deep antagonism which faced the labor movement in Los Angeles—antagonism probably more bitter than in any other industrialized community outside the South.

The authors of this book point out their problem as historians by observing, "Although time erases the worst of the vindictive memories in the minds of participants in labor disputes, a story such as this one cannot be built exclusively on interviews with aging leaders from both sides. Rather, it must be based on printed evidence that often is highly inflamed and partisan . . . [but] we have attempted to maintain an objective point of view."

They succeeded. Their success has given not only a thorough, detailed study of the people and incidents involved in labor-management relations during the period but an important backdrop to an understanding of the current AFL-CIO organizing drive in the area.

—HARRY BERNSTEIN

Labor Editor, Los Angeles Times

## Concern for Older Workers

*Aging and the Economy.* Edited by Harold L. Orbach and Clark Tibbitts. Ann Arbor, University of Michigan Press, 1963. 237 pp. \$7.50.

Like most symposia, this book, incorporating papers prepared for the University of Michigan's Fifteenth Annual Conference on Aging, represents a rather checkered compilation of studies, all roughly related to the economics of aging. The discussion ranges from excellent treatments of employment opportunities for older workers by A. J. Jaffe, Margaret Gordon, and Seymour Wolfbein to an analysis of the implications for the social health of the country by Dr. Jack Weinberg; and from papers of the economic status of the aged by such government experts as Lenore Epstein of the Social Security Administration and Helen Lamale of the Bureau of Labor Statistics to comments on the place of the aging in our national policy by Charles Sligh, Jr., executive vice president of the National Association of Manufacturers. In all, 23 economists, gerontologists, sociologists, union officials, and industrialists offer their views on the economic position of the aged, and on such topics as our social security objectives, private pension systems, and the problems of age discrimination in the labor market.

Readers of the *Monthly Labor Review* will be especially interested in the useful analysis of the world of work and unemployment of older people. Margaret Gordon concludes that the unemployment rate of men past 60 would reach truly distressing levels if it were not for the fact that these men have been dropping out of the labor force at an accelerated rate. She anticipates that the rate of labor force withdrawal for older male workers will be further increased if the general level of unemployment in our economy continues at high levels.

Seymour Wolfbein relates the problems of unemployment among workers 45 years of age and over to the need for retraining programs. He sees their disability to be largely one of lack of skill, education, and training, and thus retraining would go far toward curing the labor market ills of the aged. With the current stress now being given to retraining programs under government auspices, one would be only too happy to share Wolfbein's optimism on this point. Unfortunately, as

I am sure he would agree, discrimination against older workers in employment is likely to continue even after they have benefited from several months of retraining.

Professor Jaffe, with characteristic courage, makes a principal point that the older worker is not really "needed" in the mainstream of our economy and suggests a more useful role for such workers in "voluntary" employment of a nonremunerative nature. In this assessment, of course, much depends on one's definition of "need." Obviously, the productive potential of workers over 65 is a rather meaningless concept in an economy with 4 million unemployed workers, many of whom are at the age of their peak productivity.

Like the book itself, in which too many experts attempt to cover too many topics in too short a space, this review can only hint at the richness of data on the place of the older population in our economic system. Although he will find the occasional dull spot, no person with an interest in the problems of the aging—their role in the labor market, their income status, or their social security—will wish to bypass this slender volume.

—GERALD G. SOMERS  
Department of Economics  
University of Wisconsin

## Events Sans Dynamics

*A History of British Trade Unionism.* By Henry Pelling. London, Macmillan & Co., Ltd., 1963. 287 pp. \$8.50, St. Martin's Press, New York.

Mr. Pelling has authored a number of books on British Labor Party history, the most recent of which was *A Short History of the Labour Party 1900-1960* (1961), which left it in "decline and dissension" as indeed the Labor Party was in the half year following the unilateral disarmament vote at its 1960 conference. Now, in *A History of British Trade Unionism*, Mr. Pelling brings the saga of British labor through the 1962 Trades Union Congress when the unions, sensing a possible Labor political victory were beginning to think about the challenges a Labor government in a precariously affluent society might present to them.

His narrative of British trade unionism's extension from its urban craft and cotton mill strongholds to embrace the miners, the transport workers, and the unskilled machine minders of the



newer industries, plus civil servants and a minority of nonmanual workers in private employment is a lucid and entirely adequate history of the unions from their beginnings until World War II. Into it he weaves sharp analyses of the immediate causes of the developments he recounts. Yet, one puts this useful summary down somewhat dissatisfied. It is two dimensional. Perhaps he would have done better to have undertaken a revision of G. D. H. Cole's *A Short History of the British Working Class* (1947).

In the first half of the 19th century, the organized minority of British workers alternated between trade union and political thrusts in search of the most effective means of bettering their lot. At the end of the century, the Labor Party came into being. At least since 1918, most active unionists have seen the union and the Labor Party as two expressions of the same movement, looking to them both for protection of sectional interests and for the creation of a new and better Britain.

Both arms of the movement were nearly broken in the interwar years, the unions by the General Strike in 1926 and the Labor Party by its leaders' desertion in 1931. Mr. Pelling handles both these mishaps too gently. While his description of the vigor which union leaders like Ernest Bevin and Walter Citrine displayed in salvaging the Labor Party is good, he does not follow through with a résumé of the unions' part in remolding Labor Party policy for the 1945 electoral triumph.

Mr. Pelling fails to give us the "feel" of those years which essayists are now calling the "Age of Austerity." Trade unionists accepted de facto wage restraint from "their" government because it was implementing the social welfare and nationalization program they had helped draft for it. The British labor movement's decade of "decline and dissention" began when that program was exhausted. It created the welfare state and presided over enough of an industrial recovery to support the neocapitalist prosperity which has developed in Britain in the past decade.

Unclear as to their own role in such a society, the unions have been reluctant until the past year to consider what their relationship to a future Labor government should be. Meanwhile in the vital engineering industry, and in some others, the national bargainers lost control of wage movements to employers and shop stewards. This is

part of the background of the Communist victories in union conferences in 1960 which deprived union leaders of their ability to "deliver" their votes to the party leadership that year, endangering the party's electoral capacity and the cohesion of the dual movement. Mr. Pelling recounts the events but does not reveal their dynamics.

—WILLIAM C. GAUSMANN

Advisor on Labor and Minorities Affairs  
United States Information Agency

### Homage to Grunfeld

*Measurement in Economics: Studies in Mathematical Economics and Econometrics in Memory of Yehuda Grunfeld.* By Carl F. Christ and others. Stanford, Calif., Stanford University Press, 1963. 319 pp. \$10.

In the summer of 1960, a brilliant young econometrician, Yehuda Grunfeld, came to an untimely end by drowning. During his short professional life, he made significant contributions to a number of areas of empirical economics. This volume is a collection of essays in his memory by 12 authorities in their fields. The papers are grouped within four general areas to most of which Grunfeld had also contributed.

If there is any unifying element among all of these papers, it is the use of mathematics as a tool in the articulation and refinement of economic theory and in the interpretation and manipulation of the data for testing and modifying the theory. Some of these articles are more accessible to the general economist than are others, but only in the final section on econometric methodology are the demands on the mathematical knowledge high enough to severely limit the readership.

In the first section, on consumption, Milton Friedman attempts to improve his formulation of the permanent-income hypothesis in the light of past critical discussions. Nissan Liviatan presents some statistical tests of this hypothesis, allowing for the fact that basic survey data are subject to response errors, which for most purposes are indistinguishable from Friedman's transitory income. Taking these errors into account, Liviatan holds that his tests cannot confirm the permanent-income hypothesis. In a third paper, Jacob Mincer continues his original

work on the interpretation of household data on labor force participation, family size, and income within the framework of familiar economic theory. Don Patinkin's article on demand curves and consumer surplus is expository and attempts to clarify the well-known Marshallian analysis.

The second major section contains three articles on production and capital. In the first, Griliches expresses his dissatisfaction with the available measures of stock which are used in investment functions, and tries to clarify his thinking for the benefit of the reader. Yair Mundlak, another brilliant young Israeli econometrician, discusses the problem of developing and fitting models to both cross section and time series data. In the last paper in this section, Nerlove applies a generalized Cobb-Douglas production function (one more tribute to the durability of this function) to the electricity industry, subject to the condition that costs be minimized.

In the third section, Carl Christ relates rates of return on four types of liquid assets to their "portfolio" composition among holders. Harberger discusses the long-term inflation in Chile.

In the final section, Leo Goodman extends some work he had begun with Grunfeld on measuring relationships among time series. Lester Telser writes about the estimation of transition probabilities in Markov processes. This is one of the most fascinating tools of analysis of the postwar period, and has been applied in a number of areas of great interest to labor economists: Labor force turnover, industry and occupational employment distributions, and wage-rate patterns. In the final article, Henri Theil develops suitable measures and relationships for the kind of survey data which are reports of direction of change rather than magnitude.

In summary, this is a collection of wide-ranging but rather mathematical articles. All of these represent work in progress, rather than final results. The extent to which this work is inaccessible will diminish with time as more and more young economists are graduated with the necessary equipment. These papers present the use of mathematics in economics in its finest form—as aids to judgment rather than substitutes for it.

—HYMAN B. KAITZ

U.S. Department of Commerce

## Some Unsettled Questions

*The Economics of Welfare Policies.* By Margaret S. Gordon. Columbia University Press, 1963. 159 pp. \$3.

This concise and highly readable book is one of a series on the economics of health, education, and welfare commissioned by the Ford Foundation. The other two are: *The Economics of Health*, by Herbert Klarman of Johns Hopkins University (not published as of the time of this review), and *The Economic Value of Education*, by T. W. Schultz of the University of Chicago, published in 1963.

The purpose of the present volume is "to stimulate interest in the economic issues associated with welfare policies and to call attention to some of the important unsettled questions, rather than to provide an exhaustive discussion of all the problems." In her attendant review of the professional literature on welfare programs and public welfare policies, Dr. Gordon has found, since World War II, a "surprising lack of interest" among American economists and, to a lesser degree, among economists in Western Europe. This book, then, represents an effort to encourage professional interest in this important area of economic analysis by calling attention to specific types of policy problems. These of course relate to one aspect of the broader phenomenon of widespread poverty prevailing in industrially sophisticated, high-income nations, as well as in economically depressed countries.

The scope of this study is succinctly stated by the author, "to trace the growth of public welfare expenditures, refer briefly to private welfare expenditures, compare public welfare expenditures in this country with those in foreign countries, and present some data on the income-redistribution effects of welfare programs. Then, for purposes of a more intensive treatment of economic issues in the welfare field, . . . [to] consider the economics of two major American public welfare programs—OASDI and unemployment insurance." Dr. Gordon has also included a helpful appendix which describes the provisions of the two systems as of the end of 1961. A list of 226 sources referred to in the text, classified by subject, constitutes a very useful bibliography. The book is well indexed, containing an author index (149 entries) as well as a subject index.

In discussing the "piecemeal character of our approach to welfare policies" (which, it might be said, results from the expansion and liberalization over time in our income maintenance and income security programs without any major effort to coordinate separate programs into a consistent and comprehensive system), the author highlights the "need for greater attention to the overall impact of our complex array of welfare policies on the distribution of real income and on the stability and growth of the economy as a whole."

The volume is an important contribution to public welfare literature and should prove of value to a broad and diverse audience.

—ELEANOR M. SNYDER  
National Planning Association

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*Injury Experience in the Metal Industries, 1960.* By John C. Machisak and others. Washington, U.S. Department of the Interior, Bureau of Mines, 1963. 87 pp. (Information Circular 8172.)

*Injury Experience in the Nonmetal Industries (Except Stone and Coal), 1960.* By John C. Machisak and others. Washington, U.S. Department of the Interior, Bureau of Mines, 1963. 93 pp. (Information Circular 8173.)

*Injury Rates in New York State Industries, 1962.* By Lela Keogh and Herbert Prince. New York, State Department of Labor, Division of Research and Statistics, 1963. 62 pp. (Publication B-145.)

*Disabling Work Injuries to Office Workers in California.* San Francisco, California Department of Industrial Relations, Division of Labor Statistics and Research, 1963. 46 pp.

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*Adjustment Problems of a Long-Established Industrial Relations System: An Appraisal of British Engineering, 1954-61.* By Milton Derber. (In Quarterly Review of Economics and Business, University of Illinois, Champaign, Winter 1963, pp. 37-48. \$1.50.)

*Problems of Collective Bargaining in a Changing Technology—Its Impact on Wages, Working Conditions and Fringe Benefits.* By Joseph W. Bloch, Harry J. Waisglass, E. Benson. (From British Columbia Labor-Management Conference, 1963, pp. 129-156.) Vancouver, University of British Columbia, Institute of Industrial Relations, 1963. \$2.20.

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## Education and Training

*Experiments in Vocational Education in a Developing Country.* By P. F. Harburger. (In International Labor Review, Geneva, January 1964, pp. 29-42. 75 cents. Distributed in United States by Washington Branch of ILO.)

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*Your Future in Printing.* By George Reinfeld, Jr. New York, Richards Rosen Press, Inc., 1963. 160 pp., bibliography. (Careers in Depth.) \$2.95.

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*Custom and Past Practice in Labor Arbitration.* By Richard P. McLaughlin. (In *Arbitration Journal*, New York, Vol. 18, No. 4, 1963, pp. 205-228. \$1.75.)

*The U.S. Civil Service Learns To Live With Executive Order 10,988: An Interim Appraisal.* By Wilson R. Hart. (In *Industrial and Labor Relations Review*, Ithaca, N.Y., January 1964, pp. 203-220. \$1.75.)

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*Collective Agreement Provisions in Major Manufacturing Establishments.* Ottawa, Canadian Department of Labor, Economics and Research Branch, 1963. 31 pp.

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*Human Resources in the Urban Economy.* Edited by Mark Perlman. Washington, Resources for the Future, Inc., 1963. 265 pp. \$4.50, Johns Hopkins Press, Baltimore, Md.

*The Economics of Human Resources.* By H. Correa. Amsterdam, North-Holland Publishing Co., 1963. 262 pp. f25.

*An Active Manpower Policy.* By Solomon Barkin. (In *Free Labor World*, International Conference of Free Trade Unions, Brussels, November 1963, pp. 11-15.)

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*Women in the Work Force.* (In *Occupational Health Bulletin*, Department of National Health and Welfare, Ottawa, Canada, Vol. 18, No. 12, 1963. 4 pp.)

*The Flexible Work-Year: An Answer to Unemployment.* By Benjamin Graham. Santa Barbara, Calif., Center for the Study of Democratic Institutions, 1964. 12 pp. Single copy free.

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*The Appraisal of Job Performance (With Special Reference to the Use of the Comparator).* By Melany E. Baehr. Chicago, University of Chicago, Industrial Relations Center, 1963. 27 pp. (Occasional Papers, 27.)

*Programmed Instruction.* By Ned A. Rosen and Emil A. Mesics. Ithaca, N.Y., Cornell University, New York State School of Industrial and Labor Relations, 1963. 10 pp., bibliography. (Reprint Series 141; from *Business Quarterly*, Canada's Management Journal, Summer 1963.) Single copies free.

*Personnel Panorama—1963: II, Personnel Developments on the U.S. Federal Level.* By John W. Macy, Jr. (In *Public Personnel Review*, Chicago, January 1964, pp. 7-12. \$2.)

*Personnel Panorama—1963: V, The U.S. State and Local Scene.* By Keith Ocheltree. (In *Public Personnel Review*, Chicago, January 1964, pp. 20-23. \$2.)

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	Report No.
<i>Anchorage, Alaska, 1959</i> -----	237-29
<i>Fairbanks, Alaska, 1959</i> -----	237-30
<i>Ketchikan, Alaska, 1960</i> -----	237-31
<i>Juneau, Alaska, 1960</i> -----	237-32
<i>Detroit, Mich., 1960-61 and Supplement 1 (2d report)</i> -----	237-51
<i>New York, N.Y., 1960-61 and Supplement 1 (2d report)</i> -----	237-54
<i>Chicago, Ill., 1960-61 and Supplement 1 (2d report)</i> -----	237-55
<i>Nashville, Tenn., 1961; Supplement 1</i> -----	237-56
<i>Denver, Colo., 1961</i> -----	237-59
<i>Dayton, Ohio, 1961; Supplement 1</i> -----	237-60
<i>Lancaster, Pa., 1961; Supplement 1</i> -----	237-64

*Income-Loss Protection Against Short-Term Sickness, 1948-62.* By Alfred M. Skolnik. (In Social Security Bulletin, U.S. Department of Health, Education, and Welfare, Social Security Administration, Washington, January 1964, pp. 4-12, 23. 25 cents, Superintendent of Documents, Washington.)

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*Women in the World Today: Women in High-Level Elective and Appointive Positions in National Governments.* Washington, U.S. Department of Labor, Women's Bureau, 1963. 18 pp. (International Report No. 1.) 20 cents, Superintendent of Documents, Washington. Other reports in this series include:

	Report No.	Pages	Price (cents)
<i>Political Rights of Women in Member Nations of the United Nations</i> -----	2	19	25
<i>Policies of National Governments on Employing Women</i> -----	3	20	25

## Productivity and Technological Change

*Increasing Worker Productivity: How the Soviets Do It.* By Barry M. Richman. (In Personnel, American Management Association, New York, January-February 1964, pp. 8-21. \$1.75; \$1.25 to AMA members.)

*Jobs, Men, and Machines: Problems of Automation.* Edited by Charles Markham. New York, Frederick A. Praeger, 1964. 166 pp. (Published for American Foundation on Automation and Employment.) \$4.95.

*How To Get Along With Automation.* By Donald A. Laird and Eleanor C. Laird. New York, McGraw-Hill Book Co., Inc., 1964. 353 pp., bibliography. \$6.95.

*The Myths of Automation.* By John I. Snyder, Jr. (In American Child, New York, January 1964, pp. 1-5. 50 cents.)

*Experience of Other Countries in Dealing With Technological Unemployment.* By Michael T. Kastanek. Washington, U.S. Department of Labor, Bureau of Employment Security, 1963. 42 pp., bibliography. (BES ES-220.)

## Social Security

*Workmen's Compensation and the Social Security Disability Program: A Contrast.* By Arthur Abraham and Irwin Wolkstein. (In Vanderbilt Law Review, Nashville, Tenn., October 1963, pp. 1055-1079. \$2.)

*Some Recent Developments in the Substantive Law of Workmen's Compensation.* By Wex S. Malone. (In Vanderbilt Law Review, Nashville, Tenn., October 1963, pp. 1039-1054. \$2.)

	Report No.	Pages	Price (cents)
<i>Equal Pay in Member Nations of the International Labor Organization</i> -----	4	9	15
<i>Protective Labor Legislation for Women in 91 Countries</i> -----	5	36	30
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<i>Notes on Women's Employment in the United States and Nine European Countries</i> -----	7	5	15

*Writing for Business.* By Mary C. Bromage. Ann Arbor, Mich., George Wahr Publishing Co., 1964. 177 pp. \$2.95.

*The Economists of the New Frontier—An Anthology.* Edited by Hughel Wilkins and Charles B. Friday. New York, Random House, 1963. 338 pp., bibliography. \$5.95.

*The Price of Growth.* By T. Wilson. (In *Economic Journal*, Royal Economic Society, London, December 1963, pp. 603-617. 15s, Macmillan and Co., Ltd., London; also available from St. Martin's Press, New York.)

*The Postwar Cycles: A Graphic Study of Selected Major Business Indicators.* By William B. Franklin. New York, National Industrial Conference Board, Inc., 1963. 62 pp. (Technical Paper 12.) \$17.50; \$3.50 to NICB associates and Government agencies.

*Economic Planning in France.* By John Hackett and Anne-Marie Hackett. London, George Allen & Unwin Ltd., 1963. 418 pp., bibliography.

*Business Potential in the European Common Market.* By Robert Theobald. New York, American Management Association, 1963. 72 pp. (Research Study 62.) \$3.75; \$2.50 to AMA members.

*Myself: The Autobiography of John R. Commons.* Madison, University of Wisconsin Press, 1964. 201 pp. \$1.75, paper.

*Labor Law and Practice in Turkey.* Washington, U.S. Department of Labor, Bureau of Labor Statistics, 1963. 70 pp., bibliography. (BLS Report 239.) 45 cents, Superintendent of Documents, Washington. Other reports in this series include:

	Report No.	Pages	Price (cents)
<i>Labor Law and Practice in Mexico</i> -----	240	70	45
<i>Labor Law and Practice in Austria</i> -----	241	57	40
<i>Labor Law and Practice in Ecuador</i> -----	242	41	35
<i>Labor Law and Practice in Haiti</i> -----	244	55	40
<i>Labor Law and Practice in Yugoslavia</i> --	250	63	40

*Source Book of a Study of Occupational Values and the Image of the Federal Service.* By Franklin P. Kilpatrick, Milton C. Cummings, Jr., M. Kent Jennings. Washington, Brookings Institution, 1964. xxv, 681 pp. \$10.

*Modern Maintenance Management.* Edited by Elmo J. Miller and Jerome W. Blood. New York, American Management Association, 1963. 144 pp. (Management Report 77.)



# Current Labor Statistics

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<sup>1</sup> This table is included in the January, April, July, and October issues of the *Review*.

NOTE: With the exceptions noted, the statistical series here from the Bureau of Labor Statistics are described in *Techniques of Preparing Major BLS Statistical Series* (BLS Bulletin 1168, 1954, and cover the United States without Alaska and Hawaii.

## A.—Employment

TABLE A-1. Estimated total labor force classified by employment status and sex

(In thousands)

Employment status	Estimated number of persons 14 years of age and over <sup>1</sup>														
	1964	1963												Annual average	
	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	Jan.	1961	1960
Total, both sexes															
Total labor force.....	74,514	75,201	76,000	76,086	75,811	77,167	77,917	77,901	75,864	74,897	74,382	73,999	73,323	74,175	73,126
Civilian labor force.....	71,793	72,461	73,261	73,344	73,062	74,418	75,173	75,165	73,127	72,161	71,650	71,275	70,607	71,603	70,612
Unemployment.....	4,565	3,846	3,936	3,453	3,516	3,857	4,322	4,846	4,066	4,063	4,501	4,918	4,672	4,806	3,931
Unemployment rate seasonally adjusted <sup>2</sup> .....	5.6	5.5	5.9	5.5	5.6	5.5	5.6	5.7	5.9	5.7	5.6	6.1	5.8	6.7	5.6
Unemployed 4 weeks or less.....	2,069	1,734	1,955	1,623	1,682	1,670	1,907	2,802	1,833	1,597	1,553	1,814	1,996	1,897	1,799
Unemployed 5-10 weeks.....	988	859	767	662	617	806	1,221	806	679	672	963	1,315	1,162	964	823
Unemployed 11-14 weeks.....	402	324	349	251	332	430	260	222	262	371	598	485	361	411	353
Unemployed 15-26 weeks.....	605	492	401	443	382	439	376	502	649	743	696	684	612	728	502
Unemployed over 26 weeks.....	501	436	463	476	503	510	557	514	643	681	691	619	541	804	454
Employment.....	67,228	68,615	69,325	69,891	69,546	70,561	70,851	70,319	69,061	68,097	67,148	66,358	65,935	66,796	66,681
Nonagricultural.....	63,234	64,576	64,548	64,541	64,220	65,065	64,882	64,365	63,883	63,424	62,812	62,309	61,730	61,333	60,958
Worked 35 hours or more.....	47,179	50,817	46,129	50,960	50,462	47,678	47,214	49,804	50,383	46,505	48,669	47,063	48,480	47,257	46,888
Worked 15-34 hours.....	9,637	7,679	12,456	7,402	7,124	6,985	6,556	7,015	7,261	10,455	7,588	8,573	7,235	7,522	8,249
Worked 1-14 hours.....	4,164	4,092	3,935	3,893	3,645	3,261	3,332	3,580	4,144	3,856	4,119	4,238	3,845	3,610	3,279
With a job but not at work <sup>3</sup> .....	2,255	1,985	2,029	2,288	2,990	7,142	7,780	3,966	2,093	2,608	2,436	2,432	2,172	2,946	3,042
Agricultural.....	3,993	4,039	4,777	5,350	5,326	5,496	5,969	5,954	5,178	4,673	4,337	4,049	4,206	5,463	5,723
Worked 35 hours or more.....	2,108	2,179	2,994	3,716	3,619	3,702	4,130	4,199	3,489	3,198	2,687	2,261	2,522	3,540	3,811
Worked 15-34 hours.....	1,042	1,100	1,196	1,094	1,170	1,155	1,237	1,226	1,196	1,041	1,042	1,040	987	1,245	1,279
Worked 1-14 hours.....	549	476	411	442	424	444	466	413	415	305	467	483	444	477	444
With a job but not at work <sup>3</sup> .....	294	284	176	98	112	196	137	119	80	129	241	267	249	200	190
Males															
Total labor force.....	49,731	49,924	50,285	50,368	50,602	52,060	52,477	52,204	50,483	50,010	49,675	49,503	49,269	49,918	49,507
Civilian labor force.....	47,041	47,215	47,577	47,657	47,884	49,342	49,765	49,500	47,778	47,306	46,975	46,816	46,585	47,378	47,025
Unemployment.....	2,881	2,477	2,253	1,874	1,902	2,224	2,516	2,779	2,434	2,600	3,013	3,293	3,080	3,060	2,541
Employment.....	44,160	44,739	45,324	45,784	45,982	47,118	47,249	46,722	45,345	44,706	43,962	43,523	43,505	44,318	44,485
Nonagricultural.....	40,686	41,294	41,488	41,644	41,880	42,733	42,538	42,078	41,205	40,762	40,251	39,994	39,539	39,811	39,807
Worked 35 hours or more.....	32,879	34,793	32,166	35,387	35,317	34,007	33,791	35,283	35,055	32,806	33,648	32,710	33,648	32,984	32,511
Worked 15-34 hours.....	4,580	3,466	6,442	3,238	3,205	3,345	3,060	3,256	3,161	4,941	3,439	4,026	3,251	3,587	4,100
Worked 1-14 hours.....	1,777	1,718	1,586	1,610	1,552	1,441	1,437	1,551	1,795	1,658	1,688	1,779	1,593	1,511	1,860
With a job but not at work <sup>3</sup> .....	1,452	1,311	1,292	1,410	1,808	3,941	4,250	1,988	1,193	1,357	1,476	1,481	1,351	1,729	1,636
Agricultural.....	3,474	3,445	3,836	4,139	4,103	4,385	4,711	4,644	4,140	3,945	3,711	3,529	3,666	4,508	4,678
Worked 35 hours or more.....	1,908	1,951	2,622	3,121	3,067	3,232	3,591	3,634	3,071	2,888	2,383	2,074	2,281	3,132	3,365
Worked 15-34 hours.....	795	820	754	626	631	669	681	637	702	700	730	786	751	827	792
Worked 1-14 hours.....	497	409	307	309	301	315	329	276	296	247	384	423	400	370	348
With a job but not at work <sup>3</sup> .....	274	263	154	84	102	168	111	96	68	112	216	246	232	179	172
Females															
Total labor force.....	24,783	25,277	25,715	25,718	25,209	25,108	25,440	25,697	25,381	24,886	24,707	24,492	24,054	24,257	23,619
Civilian labor force.....	24,752	25,246	25,684	25,687	25,178	25,076	25,408	25,665	25,349	24,854	24,675	24,460	24,022	24,225	23,587
Unemployment.....	1,684	1,369	1,682	1,580	1,615	1,633	1,806	2,067	1,632	1,463	1,489	1,625	1,592	1,747	1,390
Employment.....	23,068	23,877	24,001	24,107	23,563	23,443	23,602	23,598	23,717	23,391	23,186	22,835	22,430	22,478	22,196
Nonagricultural.....	22,548	23,282	23,061	22,897	22,340	22,332	22,344	22,287	22,679	22,663	22,560	22,315	21,890	21,523	21,151
Worked 35 hours or more.....	14,301	16,020	13,962	15,972	15,147	13,672	13,424	14,522	15,327	13,699	15,022	14,356	14,835	14,273	13,877
Worked 15-34 hours.....	5,057	4,213	6,014	4,164	3,921	3,640	3,496	3,760	4,099	5,515	4,149	4,547	3,983	3,934	4,149
Worked 1-14 hours.....	2,387	2,377	2,349	2,282	2,092	1,819	1,895	2,029	2,352	2,198	2,430	2,459	2,252	2,098	1,919
With a job but not at work <sup>3</sup> .....	803	674	736	879	1,183	3,202	3,529	1,978	900	1,251	960	950	820	1,217	1,206
Agricultural.....	520	594	940	1,210	1,223	1,111	1,258	1,310	1,038	728	625	520	540	955	1,045
Worked 35 hours or more.....	199	224	372	597	551	467	539	564	418	311	204	187	243	408	445
Worked 15-34 hours.....	247	280	443	467	537	485	556	590	493	341	312	255	236	419	486
Worked 1-14 hours.....	53	69	104	134	122	129	137	135	117	59	83	57	44	107	96
With a job but not at work <sup>3</sup> .....	20	21	22	15	10	28	26	23	12	17	26	20	17	22	17

<sup>1</sup> Estimates are based on information obtained from a sample of households and are subject to sampling variability. Data relate to the calendar week ending nearest the 15th day of the month. The employed total includes all wage and salary workers, self-employed persons, and unpaid workers in family-operated enterprises. Persons in institutions are not included. Because of rounding, sums of individual items do not necessarily equal totals.

<sup>2</sup> Unemployment as a percent of labor force.

<sup>3</sup> Includes persons who had a job or business but who did not work during the survey week because of illness, bad weather, vacation, or labor dispute. Prior to January 1957, also included were persons on layoff with definite instructions to return to work within 30 days of layoff and persons who had

new jobs to which they were scheduled to report within 30 days. Most of the persons in these groups have, since that time, been classified as unemployed.

NOTE: For a description of these series, see Explanatory Notes (in *Employment and Earnings*, U.S. Department of Labor, Bureau of Labor Statistics, current issues).

Figures for periods prior to April 1962 are not strictly comparable with current data because of the introduction of 1960 Census data into the estimation procedure. The change primarily affected the labor force and employment totals, which were reduced by about 200,000. The unemployment totals were virtually unchanged.

TABLE A-2. Employees in nonagricultural establishments, by industry<sup>1</sup>

[In thousands]

Revised series: see box, p. 348

Industry	1964												Annual average		
	Jan. <sup>2</sup>	Dec. <sup>2</sup>	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	Jan.	1962	1961
Total employees.....	56,896	58,586	58,220	58,426	58,211	57,651	57,422	57,609	56,967	56,505	55,714	55,374	55,409	55,841	54,224
Mining.....	616	630	634	637	641	646	641	650	643	632	616	618	622	652	672
Metal mining.....	82.3	83.5	84.1	84.4	84.7	84.4	84.0	83.0	81.5	78.7	79.5	77.9	77.9	82.8	87.4
Iron ores.....	26.4	27.6	27.6	27.9	28.1	27.9	26.9	26.5	24.4	23.1	22.9	21.5	21.5	25.5	26.9
Copper ores.....	27.9	27.8	27.6	27.5	27.5	27.5	27.9	27.9	28.5	28.0	28.0	28.0	28.0	28.5	29.0
Coal mining.....	137.1	136.1	136.0	134.5	135.1	125.9	138.8	141.5	142.8	141.7	147.3	148.1	151.7	161.3	161.3
Bituminous.....	125.8	124.8	125.0	123.8	124.5	114.5	128.0	130.5	131.9	130.5	135.8	136.6	139.8	147.1	147.1
Crude petroleum and natural gas.....	294.2	291.5	289.5	295.0	297.9	302.2	300.3	295.0	289.7	288.1	287.8	289.1	299.2	303.1	303.1
Crude petroleum and natural gas fields.....	160.9	161.2	161.6	163.3	166.5	167.5	166.3	163.0	162.9	162.3	163.1	163.4	167.4	171.3	171.3
Oil and gas field services.....	133.3	130.3	127.9	131.7	131.4	134.7	134.0	132.0	126.8	125.8	124.7	125.7	131.8	131.8	131.8
Quarrying and nonmetallic mining.....	116.2	122.6	127.1	126.7	128.2	128.5	127.0	123.3	118.1	107.7	103.8	106.8	118.7	119.8	119.8
Contract construction.....	2,620	2,932	3,176	3,333	3,378	3,437	3,364	3,232	3,049	2,846	2,556	2,470	2,584	2,909	2,816
General building contractors.....	889.9	972.4	1,011.6	1,026.4	1,055.9	1,033.5	984.6	916.0	864.0	768.6	741.7	781.2	881.1	874.9	874.9
Heavy construction.....	536.0	632.4	706.3	723.2	735.5	718.4	691.0	635.7	551.0	451.0	420.7	448.4	593.8	583.3	583.3
Highway and street construction.....	258.3	329.9	387.5	398.8	404.6	392.3	377.6	341.5	274.9	203.8	181.9	197.7	298.1	291.5	291.5
Other heavy construction.....	277.7	302.5	318.8	324.4	330.9	326.1	313.4	294.2	276.1	247.2	238.8	250.7	295.7	291.8	291.8
Special trade contractors.....	1,506.1	1,571.2	1,615.1	1,628.4	1,645.2	1,612.0	1,556.1	1,497.2	1,430.9	1,336.5	1,308.0	1,354.2	1,434.5	1,357.9	1,357.9
Manufacturing.....	16,965	17,138	17,229	17,367	17,398	17,199	17,050	17,111	16,960	16,845	16,756	16,683	16,687	16,859	16,327
Durable goods.....	9,695	9,763	9,789	9,811	9,801	9,609	9,666	9,738	9,673	9,593	9,508	9,474	9,481	9,493	9,072
Nondurable goods.....	7,270	7,375	7,440	7,556	7,597	7,590	7,384	7,373	7,287	7,252	7,248	7,209	7,206	7,367	7,255
Durable goods.....															
Ordnance and accessories.....	276.5	277.4	276.4	276.7	276.4	275.7	276.2	275.5	274.5	273.9	277.9	279.2	279.8	270.7	234.7
Ammunition, except for small arms.....	195.4	195.9	193.8	193.3	192.4	191.1	191.1	189.3	187.7	186.9	189.8	190.6	190.2	183.4	153.3
Sighting and fire control equipment.....	23.0	23.6	24.2	25.2	26.1	26.6	27.7	28.6	29.4	30.1	30.9	31.5	32.1	32.1	47.8
Other ordnance and accessories.....	58.1	58.5	59.0	59.2	58.8	58.5	58.5	58.5	58.2	57.6	58.0	57.7	58.1	55.1	47.8
Lumber and wood products, except furniture.....	564.9	583.4	597.2	605.9	614.1	608.8	589.4	584.9	594.6	571.9	560.9	556.1	561.2	588.7	582.9
Logging camps and logging contractors.....	74.8	81.8	86.8	89.9	93.3	89.9	82.8	78.5	82.4	74.1	71.1	72.6	74.7	83.0	84.6
Sawmills and planing mills.....	239.6	248.6	254.8	258.0	261.5	263.1	256.2	255.4	257.1	248.3	244.9	241.8	244.0	255.7	257.9
Millwork, plywood, and related products.....	152.5	154.1	156.3	157.6	158.3	154.7	150.6	149.9	155.1	151.7	148.0	146.4	147.3	151.9	143.2
Wooden containers.....	34.0	34.7	34.6	35.0	35.7	36.5	36.4	36.6	36.0	35.0	34.3	34.0	34.2	36.4	38.4
Miscellaneous wood products.....	64.0	64.2	64.7	65.4	65.3	64.6	63.4	64.5	64.0	62.8	62.6	61.3	61.0	61.8	59.0
Furniture and fixtures.....	391.0	395.7	397.8	399.7	399.1	396.7	386.5	387.7	382.8	382.6	383.0	382.3	384.2	385.1	367.5
Household furniture.....	287.8	290.6	291.2	291.5	289.3	286.7	279.4	280.7	278.0	278.9	278.6	277.3	276.7	276.0	262.0
Office furniture.....	27.0	27.2	27.5	27.4	27.3	27.3	25.8	26.9	26.6	26.8	27.0	27.2	28.3	27.8	26.6
Partitions, office and store fixtures.....	36.6	37.8	39.3	40.5	40.9	40.4	39.0	38.2	37.8	38.7	38.9	39.6	40.6	38.2	40.7
Other furniture and fixtures.....	40.3	41.5	41.6	41.4	41.9	41.8	40.9	41.1	40.0	39.1	38.7	38.9	39.6	40.7	40.7
Stone, clay, and glass products.....	584.9	604.0	619.9	623.9	629.9	635.6	630.0	626.8	615.3	599.6	574.1	563.2	567.7	594.0	582.0
Flat glass.....	32.2	32.6	32.2	31.6	31.3	30.3	30.2	30.1	29.9	29.3	29.5	29.7	30.4	29.9	29.9
Glass and glassware, pressed or blown.....	110.0	112.3	113.4	113.8	115.9	116.7	116.1	115.6	113.6	112.6	110.9	109.5	107.6	109.6	106.6
Cement, hydraulic.....	36.7	38.2	40.1	40.9	42.0	42.6	42.7	42.3	41.0	40.0	36.3	35.4	37.0	40.1	40.2
Structural clay products.....	63.0	67.4	68.5	68.7	70.1	72.0	71.3	71.1	69.8	67.7	63.9	62.9	64.2	68.3	70.4
Pottery and related products.....	44.5	45.4	45.1	44.8	44.4	43.7	43.5	43.7	43.6	43.0	42.7	42.8	43.8	42.9	42.9
Concrete, gypsum, and plaster products.....	159.5	167.8	177.2	180.9	183.3	185.4	184.0	183.3	177.3	168.0	154.8	148.6	150.8	164.4	158.5
Other stone and mineral products.....	119.8	121.2	121.9	121.3	121.6	122.8	122.4	121.3	120.3	118.5	116.5	115.5	116.2	118.9	116.4
Primary metal industries.....	1,168.2	1,164.5	1,152.0	1,152.7	1,166.0	1,170.8	1,195.9	1,209.1	1,191.6	1,174.8	1,151.9	1,136.4	1,123.0	1,163.8	1,142.7
Blast furnace and basic steel products.....	582.1	577.0	568.8	571.4	581.8	593.2	615.9	623.9	612.2	597.9	578.5	564.3	550.6	591.9	595.5
Iron and steel foundries.....	202.7	202.7	201.3	200.0	201.7	196.2	198.4	200.5	198.4	197.2	195.1	194.4	193.4	193.6	186.7
Nonferrous smelting and refining.....	69.6	69.8	69.9	69.7	70.2	70.3	70.3	69.6	68.4	67.6	66.7	66.5	67.0	68.1	66.6
Nonferrous rolling, drawing, and extruding.....	184.4	184.6	182.7	182.7	182.7	183.5	183.0	185.4	183.1	182.0	181.4	181.0	180.9	181.3	174.4
Nonferrous foundries.....	71.5	71.8	71.3	71.0	71.3	70.4	70.9	71.4	71.3	71.5	71.5	71.6	71.9	70.0	63.7
Miscellaneous primary metal industries.....	57.9	58.6	58.0	57.9	58.3	57.2	57.4	58.3	58.2	58.6	58.7	58.7	59.2	58.9	55.7
Fabricated metal products.....	1,169.9	1,175.2	1,177.8	1,182.7	1,178.6	1,160.5	1,149.1	1,163.0	1,147.6	1,133.7	1,121.5	1,119.7	1,123.0	1,127.5	1,084.5
Metal cans.....	60.8	60.3	61.2	61.6	64.2	65.5	65.0	64.6	63.0	62.0	60.2	58.8	58.1	61.3	59.9
Cutlery, handtools, and general hardware.....	141.5	141.1	139.9	138.6	137.3	132.6	130.5	135.5	134.6	134.8	134.8	135.7	136.2	134.8	127.7
Heating equipment and plumbing fixtures.....	78.6	79.0	79.0	79.3	79.2	79.0	77.5	77.0	75.9	74.8	74.3	74.5	73.4	74.9	73.2
Fabricated structural metal products.....	335.0	338.6	343.6	347.4	351.4	352.0	346.6	344.3	335.9	327.5	320.8	319.7	322.6	331.5	332.7
Screw machine products, bolts, etc.....	89.8	89.1	88.6	88.8	89.2	88.7	87.6	89.1	88.5	88.3	88.9	88.8	88.4	87.9	82.1
Metal stampings.....	204.7	205.9	205.9	205.4	198.8	187.4	189.0	196.8	196.1	194.4	192.7	193.1	196.1	190.4	177.2
Coating, engraving, and allied services.....	71.5	72.7	73.0	73.6	72.3	70.3	69.1	70.2	69.7	68.7	66.9	67.1	66.8	67.2	62.5
Miscellaneous fabricated wire products.....	59.6	59.8	58.9	59.5	58.4	58.0	57.0	57.9	57.7	57.3	57.3	56.8	57.0	56.7	53.3
Miscellaneous fabricated metal products.....	128.4	128.7	127.7	128.5	127.8	127.0	126.8	127.6	126.2	125.9	125.6	125.2	124.4	122.9	115.8

See footnotes at end of table.



TABLE A-2. Employees in nonagricultural establishments, by industry<sup>1</sup>—Continued

	[In thousands]														Revised series; see box, p. 348.	
Industry	1964	1963												Annual average		
	Jan. <sup>1</sup>	Dec. <sup>2</sup>	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	Jan.	1962	1961	
Manufacturing—Continued																
Durable goods—Continued																
Machinery.....	1,556.0	1,550.4	1,531.1	1,527.5	1,524.7	1,516.4	1,512.4	1,523.1	1,516.4	1,518.8	1,514.4	1,506.4	1,501.8	1,489.8	1,419.0	
Engines and turbines.....	87.3	86.4	86.1	86.2	86.3	85.4	84.7	84.5	84.4	85.7	85.7	85.9	86.2	84.0	79.3	
Farm machinery and equipment.....	219.6	219.0	217.2	216.9	217.6	216.6	214.6	215.1	212.3	211.6	210.8	210.4	210.3	210.7	200.9	
Construction and related machinery.....	281.3	279.5	273.9	272.4	270.9	269.1	268.3	271.0	269.4	269.4	268.4	266.8	265.7	261.7	247.5	
Metalworking machinery and equip- ment.....	170.6	170.2	169.3	168.4	167.9	166.9	166.8	168.5	168.0	168.5	168.1	167.5	168.0	169.0	161.6	
Special industry machinery.....	234.9	234.9	231.8	232.2	233.4	232.2	231.0	231.1	229.2	229.5	229.3	228.6	229.7	227.6	217.2	
General industrial machinery.....	154.3	156.2	154.0	154.4	153.9	153.6	152.8	153.0	152.3	153.5	153.9	153.8	154.8	156.3	152.0	
Office, computing, and accounting machines.....	100.5	100.1	100.1	100.3	99.7	98.7	101.2	102.9	103.3	101.9	100.1	98.8	98.3	100.8	95.4	
Service industry machines.....	183.6	183.7	181.5	180.1	179.0	178.8	175.7	177.0	174.9	173.7	173.0	171.2	170.3	167.4	156.4	
Miscellaneous machinery.....	1,570.8	1,579.8	1,584.9	1,595.4	1,590.5	1,571.7	1,566.3	1,580.4	1,572.8	1,572.4	1,577.4	1,588.9	1,597.3	1,579.2	1,474.7	
Electrical equipment and supplies.....	167.9	170.6	170.3	169.0	169.5	170.5	168.6	168.5	167.8	167.6	167.4	168.0	168.9	167.8	162.8	
Electric distribution equipment.....	188.6	188.0	187.6	187.8	187.8	187.8	187.8	188.2	186.8	186.1	185.7	186.3	186.6	185.4	176.6	
Household appliances.....	158.6	160.1	161.9	160.8	157.9	153.9	152.6	155.0	153.4	151.9	149.2	149.8	150.0	150.2	148.2	
Electric lighting and wiring equipment.....	152.5	153.3	153.8	154.3	153.0	150.2	146.5	147.4	146.0	147.0	147.2	146.7	146.1	143.2	135.6	
Radio and TV receiving sets.....	111.3	115.3	119.7	122.6	122.2	118.3	113.5	112.1	106.9	103.7	104.9	106.3	108.7	110.7	102.8	
Communication equipment.....	418.1	419.2	417.5	425.0	426.1	425.5	427.1	432.0	435.8	441.0	447.1	452.1	455.5	445.0	404.7	
Electronic components and accessories.....	263.6	262.4	263.8	264.3	263.8	265.7	261.6	265.7	265.2	264.7	265.5	265.9	268.9	266.8	243.0	
Miscellaneous electrical equipment and supplies.....	110.2	110.9	110.3	111.6	110.2	99.8	108.6	111.5	110.9	110.4	110.4	111.8	112.6	110.0	101.0	
Transportation equipment.....	1,661.4	1,664.7	1,659.2	1,650.4	1,626.8	1,487.0	1,600.4	1,620.7	1,620.4	1,616.5	1,603.7	1,607.5	1,612.7	1,542.3	1,458.8	
Motor vehicles and equipment.....	780.6	782.6	777.3	768.3	752.3	617.6	732.1	747.0	745.8	738.9	727.4	730.8	740.3	691.6	633.1	
Aircraft and parts.....	658.4	657.9	654.0	652.1	648.6	644.5	643.3	644.9	644.5	647.6	649.4	653.0	655.1	634.6	619.7	
Ship and boat building and repairing.....	137.3	137.7	141.2	142.1	140.4	141.6	141.8	144.0	148.9	149.4	149.3	147.2	145.6	141.3	141.2	
Railroad equipment.....	47.7	47.2	47.3	45.1	44.1	44.3	44.7	42.3	42.3	43.0	42.3	41.6	40.0	40.6	34.6	
Other transportation equipment.....	38.8	39.5	40.6	40.4	39.2	38.9	40.1	38.9	37.6	35.3	35.3	34.9	31.7	34.2	30.3	
Instruments and related products.....	373.4	376.4	376.8	375.8	375.5	376.2	372.0	373.5	368.1	367.3	366.0	364.8	364.8	360.4	347.4	
Engineering and scientific instruments.....	72.8	72.8	73.0	73.2	73.1	73.9	73.1	73.9	73.4	73.6	74.1	74.1	75.2	73.9	74.4	
Mechanical measuring and control devices.....	98.6	99.1	97.1	96.5	97.1	98.0	97.9	97.9	97.0	97.4	97.5	97.3	96.8	95.0	89.7	
Optical and ophthalmic goods.....	42.1	42.6	42.6	42.2	42.0	41.2	41.1	42.0	41.5	41.0	40.9	40.9	40.4	40.6	39.2	
Surgical, medical, and dental equip- ment.....	53.8	53.8	54.0	53.8	54.0	53.8	52.3	53.6	53.0	52.7	52.3	52.1	51.7	50.1	48.1	
Photographic equipment and supplies.....	77.6	77.8	78.5	78.2	77.8	78.3	77.7	76.0	74.3	73.8	73.1	72.7	72.9	72.4	69.4	
Watches and clocks.....	30.3	31.6	31.9	31.9	31.5	31.0	29.9	30.1	28.9	28.8	28.1	27.7	27.8	28.3	26.4	
Miscellaneous manufacturing industries.....	378.2	391.2	415.4	420.2	419.2	409.3	388.2	393.2	388.7	381.2	377.0	371.6	365.7	391.2	378.2	
Jewelry, silverware and plated ware.....	43.4	43.7	43.8	43.4	43.1	41.9	38.8	41.7	41.5	41.6	41.5	41.9	41.7	42.3	42.4	
Toys, amusement and sporting goods.....	97.3	97.3	115.9	122.8	120.1	116.0	106.3	105.2	103.6	96.8	92.3	86.7	82.2	102.5	97.7	
Pens, pencils, office and art materials.....	33.2	33.4	32.2	32.4	32.0	31.2	31.9	32.1	31.7	31.4	31.4	30.8	30.9	31.0	30.0	
Costume jewelry, buttons, and notions.....	57.3	58.3	58.8	58.0	57.1	50.9	56.5	58.0	56.1	55.2	56.1	56.4	55.8	57.8	56.7	
Other manufacturing industries.....	156.5	159.7	164.0	163.0	163.5	159.5	155.3	156.4	155.4	155.9	155.7	155.8	155.1	157.6	151.4	
Nondurable goods																
Food and kindred products.....	1,662.4	1,709.8	1,752.0	1,832.8	1,872.6	1,864.6	1,779.5	1,732.0	1,679.9	1,659.4	1,658.2	1,648.7	1,671.1	1,759.9	1,775.2	
Meat products.....	306.6	311.6	313.5	314.0	313.6	312.9	310.7	307.8	303.6	300.6	299.1	301.8	305.4	312.9	319.5	
Dairy products.....	285.7	288.2	289.3	293.5	298.9	305.8	307.9	305.2	297.5	294.2	292.0	290.6	291.4	303.4	310.5	
Canned and preserved foods, except meats.....	201.3	228.4	297.8	354.2	341.6	264.3	227.4	203.2	197.5	197.4	190.1	196.3	253.7	249.7		
Grain mill products.....	129.9	130.2	130.1	133.8	135.1	136.1	135.9	134.1	131.1	127.8	128.6	127.6	128.4	130.8	131.0	
Bakery products.....	289.3	291.3	293.1	294.0	292.8	295.1	296.0	294.0	290.7	289.4	290.6	289.7	290.8	293.6	285.9	
Sugar.....	46.7	50.7	48.8	33.0	31.4	30.7	30.9	30.6	28.9	28.4	29.8	28.2	25.3	36.4		
Confectionery and related products.....	78.5	83.0	84.3	83.4	80.5	76.3	69.9	72.6	70.8	71.3	75.0	75.4	76.6	75.4	78.9	
Beverages.....	208.8	214.7	217.0	220.5	220.3	223.9	223.9	218.9	213.2	209.5	206.7	202.4	204.6	212.3	213.1	
Miscellaneous food and kindred prod- ucts.....	140.0	142.8	145.6	147.0	144.2	141.5	140.2	140.1	139.2	140.2	140.4	141.3	141.4	142.4	142.3	
Tobacco manufactures.....	91.6	94.8	99.5	106.6	107.5	100.5	74.9	75.6	76.5	78.6	80.8	86.1	89.1	91.0	90.7	
Cigarettes.....	38.2	38.0	38.0	38.6	38.6	38.2	38.1	37.5	37.5	37.6	37.6	37.1	37.4	37.5	38.0	
Cigars.....	23.3	23.9	23.7	23.4	23.0	21.9	22.8	22.8	23.0	23.3	23.3	23.2	23.9	25.5		
Textile mill products.....	876.2	888.0	894.8	897.7	895.8	896.5	884.0	895.1	887.6	886.9	884.8	881.2	881.4	902.6	893.4	
Cotton broad woven fabrics.....	233.2	234.4	233.8	234.2	233.7	234.0	232.4	233.0	232.5	233.0	233.5	233.4	234.9	240.4	243.6	
Silk and synthetic broad woven fabrics.....	84.9	85.4	85.1	84.3	83.7	84.1	82.5	83.6	82.6	82.1	81.9	81.9	82.3	81.7	82.6	
Weaving and finishing broad woolsens.....	46.3	45.9	45.8	47.2	47.8	49.0	49.5	50.4	50.2	50.7	50.8	50.7	49.1	51.8	51.9	
Narrow fabrics and smallwares.....	27.0	27.2	27.3	27.4	27.2	27.0	26.1	27.2	26.9	26.8	26.7	26.8	26.9	27.6	26.6	
Knitting.....	200.9	208.6	216.5	219.7	219.6	219.5	216.4	218.3	215.3	213.3	212.1	208.8	207.1	219.4	214.8	
Finishing textiles, except wool and knit.....	75.4	75.1	75.0	74.4	74.3	74.3	73.6	74.5	74.1	74.5	74.4	74.1	74.3	74.9	73.4	
Floor covering.....	38.5	38.7	38.5	37.9	37.9	37.8	37.0	37.1	37.1	37.7	37.7	38.3	38.6	37.4	35.7	
Yarn and thread.....	105.6	106.7	106.0	105.5	105.5	105.7	101.9	104.9	103.6	103.1	102.4	102.4	102.2	103.3	99.8	
Miscellaneous textile goods.....	65.0	66.2	66.6	66.5	66.1	65.1	64.6	66.1	65.3	65.7	65.3	64.8	66.0	66.3	65.9	

See footnotes at end of table.

TABLE A-2. Employees in nonagricultural establishments, by industry<sup>1</sup>—Continued

[In thousands]

Revised series; see box, p. 348.

Industry	1963												Annual average		
	Jan. <sup>2</sup>	Dec. <sup>2</sup>	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	Jan.	1962	1961
Manufacturing—Continued															
Nondurable goods—Continued															
Apparel and related products.....	1,280.0	1,298.1	1,310.1	1,329.6	1,329.0	1,331.9	1,280.0	1,289.2	1,288.2	1,280.2	1,301.2	1,284.0	1,251.2	1,266.7	1,214.5
Men's and boys' suits and coats.....	116.2	115.0	113.2	113.5	116.1	116.6	113.9	118.8	117.9	116.3	117.7	117.9	117.9	117.2	114.3
Men's and boys' furnishings.....	323.0	326.8	330.1	333.6	335.5	340.2	330.2	334.1	330.3	326.8	323.6	322.5	319.4	319.0	296.3
Women's, misses', and juniors' outerwear.....	389.3	392.3	392.0	399.8	400.6	404.5	384.9	380.2	388.4	390.5	404.8	396.0	375.1	381.7	368.6
Women's and children's undergarments.....	117.9	121.4	125.6	124.9	122.9	120.8	113.4	116.0	116.1	116.4	116.5	115.8	114.5	116.5	114.3
Hats, caps, and millinery.....	79.4	78.7	78.7	80.0	79.6	81.3	81.2	82.3	79.6	75.4	81.3	80.6	77.8	78.4	76.1
Girls' and children's outerwear.....	79.4	78.7	78.7	80.0	79.6	81.3	81.2	82.3	79.6	75.4	81.3	80.6	77.8	78.4	76.1
Fur goods and miscellaneous apparel.....	79.4	78.7	78.7	80.0	79.6	81.3	81.2	82.3	79.6	75.4	81.3	80.6	77.8	78.4	76.1
Miscellaneous fabricated textile products.....	155.9	161.0	164.1	166.3	163.9	158.2	151.1	154.1	155.0	152.6	150.0	146.4	145.5	147.2	140.9
Paper and allied products.....	621.1	625.4	626.4	626.3	629.0	629.3	620.6	624.1	615.8	614.5	613.2	609.9	613.0	614.5	601.3
Paper and pulp.....	214.0	215.5	215.3	215.5	216.9	219.6	217.2	217.8	213.6	212.9	212.2	212.2	214.1	217.3	219.6
Paperboard.....	67.9	68.2	68.2	67.9	68.0	68.3	67.9	67.9	67.7	66.8	67.4	67.2	67.5	65.8	66.3
Converted paper and paperboard products.....	149.8	150.7	150.1	150.3	151.9	150.8	147.6	147.9	146.7	147.5	146.6	145.2	145.2	144.5	137.1
Paperboard containers and boxes.....	189.4	191.0	192.8	192.6	192.2	190.6	187.9	190.5	187.8	187.3	187.0	185.3	186.2	186.9	178.3
Printing, publishing, and allied industries.....	938.6	947.0	940.8	941.7	937.8	935.1	930.5	932.8	927.9	925.3	907.7	903.3	906.0	924.9	917.3
Newspaper publishing and printing.....	324.4	327.6	325.1	326.4	325.4	325.8	325.9	325.9	323.4	321.3	303.0	302.2	302.1	324.1	325.9
Periodical publishing and printing.....	71.1	70.7	70.6	70.0	69.1	68.3	68.8	69.0	69.0	70.3	71.2	71.0	71.7	70.3	70.7
Books.....	76.5	75.2	75.6	76.2	76.2	74.1	74.4	74.1	73.7	72.8	72.4	72.7	72.5	70.9	70.9
Commercial printing.....	301.7	305.1	303.6	302.7	299.9	297.2	296.2	297.7	296.8	296.5	297.5	295.2	297.3	296.0	292.4
Bookbinding and related industries.....	50.0	50.2	49.7	50.4	50.9	51.7	51.5	51.6	50.4	50.1	49.7	49.0	49.3	49.1	47.7
Other publishing and printing industries.....	114.3	116.5	116.3	116.0	115.4	115.1	114.5	114.4	113.3	113.4	113.5	113.5	112.9	113.0	109.6
Chemicals and allied products.....	864.1	866.1	866.6	870.0	871.8	875.9	872.3	870.2	869.4	870.1	858.1	850.1	846.2	846.0	827.2
Industrial chemicals.....	284.6	284.7	285.1	284.7	286.8	289.4	288.4	287.6	285.2	284.6	283.2	282.2	282.2	283.4	281.8
Plastics and synthetics, except glass.....	173.7	173.4	172.9	172.8	172.6	172.9	172.6	170.9	168.7	166.0	164.7	164.2	164.4	162.1	153.4
Drugs.....	116.9	117.8	117.4	117.1	117.1	118.3	117.6	116.8	115.4	115.1	114.6	114.0	113.4	111.3	108.5
Soap, cleaners, and toilet goods.....	98.0	98.9	99.8	101.7	101.1	101.6	99.5	99.2	97.7	98.3	98.2	97.6	97.3	96.9	94.5
Paints, varnishes, and allied products.....	63.4	64.2	64.3	64.5	65.0	66.1	66.1	65.3	64.1	63.6	62.8	62.4	61.8	62.9	62.1
Agricultural chemicals.....	48.8	47.8	46.9	48.6	47.8	46.0	46.0	48.9	56.8	53.3	53.4	49.3	47.3	43.3	46.9
Other chemical products.....	78.7	79.3	80.2	80.6	81.4	81.6	82.1	81.5	81.5	81.2	81.2	80.4	79.8	81.9	80.0
Petroleum refining and related industries.....	181.8	184.4	186.8	188.8	191.0	193.1	191.1	190.4	188.9	187.0	185.7	185.6	184.8	195.0	201.9
Petroleum refining.....	151.5	151.9	152.4	153.0	154.6	155.8	154.4	153.9	153.4	153.6	154.3	153.7	152.1	160.5	168.4
Other petroleum and coal products.....	30.3	32.5	34.4	35.8	36.4	37.3	36.7	36.5	35.5	33.4	31.4	31.9	32.7	34.5	33.6
Rubber and miscellaneous plastic products.....	408.2	410.8	413.1	411.6	409.4	405.0	400.5	412.4	410.4	408.1	406.6	406.0	412.1	405.8	375.3
Tires and inner tubes.....	94.5	95.5	94.5	91.9	91.6	91.3	96.0	98.7	98.4	98.3	98.1	98.4	99.3	99.2	97.7
Other rubber products.....	161.3	161.6	162.9	162.3	161.5	159.8	155.7	162.1	161.1	160.6	160.9	161.3	163.7	160.5	148.6
Miscellaneous plastic products.....	152.4	153.7	155.7	157.4	156.3	153.9	148.8	151.6	150.9	149.2	147.6	146.3	149.1	146.0	128.9
Leather and leather products.....	346.4	350.7	350.3	350.8	352.7	357.9	350.6	350.7	342.6	342.0	351.5	353.9	350.9	360.3	358.2
Leather tanning and finishing.....	30.1	31.7	31.7	31.5	31.3	31.5	30.7	31.5	30.9	30.6	30.8	31.2	32.0	31.9	32.3
Footwear, except rubber.....	238.2	236.7	233.6	231.7	234.2	239.0	236.2	235.7	232.3	232.1	237.4	239.9	238.4	241.2	239.6
Other leather products.....	78.1	82.3	85.0	87.6	87.2	87.4	83.7	83.5	79.4	79.3	83.3	82.8	80.5	87.2	86.3
Transportation and public utilities.....															
Railroad transportation.....	3,878	3,929	3,944	3,968	3,982	3,976	3,975	3,954	3,897	3,859	3,847	3,844	3,775	3,903	3,903
Class I railroads.....	773.2	770.5	776.2	780.2	791.2	789.8	788.9	788.9	779.7	768.9	761.0	757.3	755.4	797.1	816.8
Class II railroads.....	672.3	675.9	681.4	685.8	696.9	695.0	694.7	694.7	684.5	674.4	666.9	664.4	663.4	700.2	717.5
Local and interurban passenger transit.....	281.3	278.9	277.9	276.2	258.3	258.4	268.9	274.4	273.2	275.7	276.6	277.4	271.1	276.9	276.9
Local and suburban transportation.....	87.2	87.5	87.8	87.8	86.8	87.0	87.7	88.1	87.3	87.8	87.8	88.2	90.5	98.5	98.5
Taxis.....	116.9	114.5	113.1	112.2	111.1	111.4	111.7	112.7	113.9	116.9	117.6	117.0	113.2	114.3	114.3
Intercity and rural buslines.....	41.4	41.2	41.8	43.1	43.6	43.7	42.7	41.6	40.5	39.7	39.9	39.9	41.1	41.4	40.9
Motor freight transportation and storage.....	912.6	924.6	935.7	934.2	921.1	920.1	912.3	877.3	868.3	858.6	856.7	853.8	879.9	845.1	845.1
Air transportation.....	213.9	212.9	212.0	211.5	212.4	211.8	210.7	209.4	208.4	207.8	207.8	207.3	207.7	200.5	195.7
Air transportation, common carriers.....	193.6	192.4	191.8	191.6	191.9	191.3	189.5	187.8	186.7	186.5	186.6	187.0	179.5	175.4	175.4
Pipeline transportation.....	19.6	19.6	19.7	20.1	20.4	20.5	20.4	19.9	20.0	20.0	20.0	20.0	20.3	21.3	22.2
Other transportation.....	292.5	300.9	302.2	306.4	305.6	305.7	302.4	305.6	294.0	297.9	302.2	306.0	297.1	303.5	303.5
Communication.....	826.5	825.8	832.5	835.0	840.0	842.4	831.6	824.4	823.7	821.2	819.2	819.2	824.7	828.9	828.9
Telephone communication.....	684.8	684.7	690.8	693.2	698.8	701.4	691.8	685.8	684.5	683.1	681.0	681.6	687.7	693.3	693.3
Telegraph communication.....	33.1	33.0	33.3	33.6	33.6	34.0	34.1	34.7	35.0	35.0	35.3	35.6	37.0	37.5	37.5
Radio and television broadcasting.....	104.3	103.8	104.1	103.9	103.3	102.7	101.3	99.6	99.9	98.8	98.6	97.7	95.8	93.9	93.9
Electric, gas, and sanitary services.....	609.8	611.1	611.3	617.9	626.5	625.9	619.1	606.7	602.8	605.2	605.0	605.6	611.1	613.7	613.7
Electric companies and systems.....	245.9	246.1	246.2	248.8	251.7	251.5	249.2	243.8	240.9	244.7	244.7	244.7	246.5	248.6	248.6
Gas companies and systems.....	154.1	154.4	154.3	155.9	158.4	158.3	156.9	153.5	153.1	152.9	153.0	153.3	155.1	155.6	155.6
Combined utility systems.....	171.3	171.9	172.1	174.2	176.6	176.3	173.8	171.0	170.8	170.4	170.5	170.9	172.7	175.0	175.0
Water, steam, and sanitary systems.....	38.5	38.7	38.7	39.0	39.8	39.8	39.2	38.4	38.0	37.2	36.8	36.7	36.7	36.7	34.5

See footnotes at end of table.

TABLE A-2. Employees in nonagricultural establishments, by industry<sup>1</sup>—Continued

(In thousands)

Revised series; see box, p. 348.

Industry	1964		1963											Annual average	
	Jan. <sup>2</sup>	Dec. <sup>3</sup>	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	Jan.	1962	1961
<b>Wholesale and retail trade.....</b>	11,855	12,766	12,166	12,014	11,942	11,878	11,832	11,848	11,720	11,740	11,497	11,433	11,535	11,582	11,337
Wholesale trade.....	3,191	3,240	3,208	3,208	3,199	3,196	3,168	3,132	3,085	3,075	3,069	3,065	3,073	3,061	2,993
Motor vehicles and automotive equipment.....	238.4	238.3	237.3	236.7	237.3	237.5	237.5	236.7	234.1	232.6	232.0	231.2	229.8	228.2	218.6
Drugs, chemicals, and allied products.....	192.6	192.7	192.1	191.7	192.1	192.1	190.7	190.2	188.5	189.1	189.2	188.8	188.5	187.0	181.5
Dry goods and apparel.....	135.1	135.3	134.6	134.0	134.9	134.9	134.8	134.1	131.9	131.7	131.9	131.5	132.2	131.5	129.4
Groceries and related products.....	508.1	501.0	512.7	514.0	512.5	508.5	508.5	497.1	475.6	472.4	476.9	474.4	477.9	487.1	485.6
Electrical goods.....	231.6	230.2	231.0	231.1	232.0	231.0	231.0	228.6	227.4	226.4	224.6	224.4	223.9	218.1	211.0
Hardware, plumbing and heating goods.....	146.2	146.1	146.5	146.5	147.2	147.3	145.8	144.1	144.1	142.9	142.3	142.1	142.3	142.3	140.4
Machinery, equipment, and supplies.....	559.1	557.9	554.5	550.9	550.1	547.2	538.9	533.5	532.1	528.3	525.8	521.7	511.8	511.8	486.4
Retail trade.....	8,664	9,526	8,958	8,806	8,743	8,682	8,664	8,716	8,635	8,625	8,429	8,368	8,462	8,521	8,344
General merchandise stores.....	2,168.9	1,805.8	1,694.3	1,652.1	1,602.0	1,583.8	1,605.4	1,590.2	1,567.5	1,537.2	1,514.5	1,588.6	1,627.0	1,673.1	1,673.1
Limited price variety stores.....	1,315.7	1,070.9	992.3	961.9	932.0	923.2	940.0	932.0	949.4	903.3	889.5	943.9	959.6	924.6	924.6
Food stores.....	1,410.7	1,410.7	1,410.7	1,410.7	1,410.7	1,410.7	1,410.7	1,410.7	1,410.7	1,410.7	1,410.7	1,410.7	1,410.7	1,410.7	1,410.7
Grocery, meat, and vegetable stores.....	1,277.0	1,260.0	1,255.0	1,243.4	1,240.2	1,238.3	1,230.5	1,222.7	1,221.7	1,221.7	1,221.7	1,221.7	1,221.7	1,221.7	1,221.7
Apparel and accessories stores.....	745.1	639.9	620.9	614.5	609.4	609.4	609.4	609.4	609.4	609.4	609.4	609.4	609.4	609.4	609.4
Men's and boys' apparel stores.....	132.7	104.7	99.9	99.3	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0
Women's ready-to-wear stores.....	275.1	240.7	233.5	229.7	223.1	218.5	223.2	229.3	238.6	221.9	215.4	223.3	229.3	229.3	223.5
Family clothing stores.....	122.3	97.5	93.1	91.8	86.8	87.5	91.2	90.0	88.9	88.9	88.9	88.9	88.9	88.9	88.9
Shoe stores.....	136.4	125.1	123.3	126.1	119.6	118.5	122.6	124.1	156.4	115.2	111.7	114.6	120.9	118.3	118.3
Furniture and appliance stores.....	409.1	400.9	397.4	393.6	392.4	390.3	389.7	387.2	385.9	383.9	383.9	383.9	383.9	383.9	383.9
Eating and drinking places.....	1,762.0	1,763.9	1,773.6	1,781.3	1,801.5	1,809.9	1,817.9	1,789.2	1,743.9	1,713.7	1,698.7	1,693.4	1,722.8	1,664.8	1,664.8
Other retail trade.....	2,983.0	2,916.0	2,894.7	2,887.2	2,896.4	2,892.8	2,892.8	2,892.8	2,892.8	2,892.8	2,892.8	2,892.8	2,892.8	2,892.8	2,892.8
Motor vehicle dealers.....	686.5	682.7	680.3	678.6	680.0	679.4	676.8	671.8	669.6	666.5	665.9	662.5	662.5	662.5	662.5
Other vehicle and accessory dealers.....	174.9	170.3	165.8	166.3	168.7	168.3	167.9	163.4	161.7	155.6	153.8	155.9	155.9	155.9	155.9
Drug stores.....	403.3	387.3	381.0	380.9	379.3	379.3	379.3	379.3	379.3	379.3	379.3	379.3	379.3	379.3	379.3
<b>Finance, insurance, and real estate.....</b>	2,874	2,880	2,878	2,884	2,887	2,919	2,916	2,885	2,858	2,842	2,825	2,813	2,806	2,798	2,731
Banking.....	746.1	744.7	743.6	743.6	743.6	752.1	749.7	739.3	730.8	720.2	727.3	723.1	723.1	714.0	693.5
Credit agencies other than banks.....	298.1	296.7	295.6	294.2	295.4	295.6	291.6	289.3	288.0	286.3	285.6	284.9	279.4	270.9	250.9
Savings and loan associations.....	89.7	89.3	88.9	88.3	89.1	89.4	87.0	85.4	85.1	84.4	84.1	84.3	81.0	75.3	75.3
Personal credit institutions.....	157.0	155.9	155.5	155.1	155.3	155.5	154.9	154.4	153.8	153.3	153.1	152.0	150.8	151.1	151.1
Security dealers and exchanges.....	123.9	123.8	123.6	123.4	123.3	125.7	124.3	123.5	123.0	123.6	122.9	122.0	121.8	123.5	123.5
Insurance carriers.....	872.2	870.8	868.6	869.8	878.4	874.2	865.3	861.6	860.0	861.3	859.3	855.7	851.4	843.7	843.7
Life insurance.....	467.2	465.3	464.7	465.1	468.5	466.0	461.2	460.0	459.0	460.1	458.9	457.2	454.1	455.6	455.6
Accident and health insurance.....	52.2	52.1	51.9	52.0	52.6	52.6	51.9	51.4	51.4	51.4	51.4	51.4	51.4	51.4	51.4
Fire, marine, and casualty insurance.....	311.0	311.5	310.2	311.1	314.9	313.5	310.8	309.3	308.8	309.0	308.3	306.8	305.7	298.5	298.5
Insurance agents, brokers, and services.....	219.8	220.0	219.3	219.6	222.4	221.3	219.2	217.4	216.6	216.1	216.1	215.0	211.9	203.9	203.9
Real estate.....	543.5	546.4	557.1	559.0	568.4	571.3	569.2	569.5	568.2	563.3	556.9	552.9	532.9	514.3	514.3
Operative builders.....	51.0	53.8	56.4	55.9	58.4	57.9	57.3	55.2	53.0	49.8	46.5	46.8	48.1	42.8	42.8
Other finance, insurance, and real estate.....	76.1	75.8	76.1	77.0	76.7	77.8	76.4	76.1	75.4	75.4	75.4	75.4	76.9	76.9	76.9
<b>Services and miscellaneous.....</b>	8,378	8,406	8,406	8,436	8,457	8,474	8,474	8,423	8,294	8,199	8,076	7,997	7,956	7,949	7,610
Hotels and lodging places.....	595.2	603.2	639.8	672.6	766.1	766.3	692.7	626.0	600.2	586.5	581.4	575.3	566.5	577.3	577.3
Hotels, tourist courts, and motels.....	551.9	559.2	592.8	615.6	659.9	662.0	633.8	575.7	554.7	545.1	540.7	534.8	539.9	521.2	521.2
Personal services.....	508.1	511.6	513.5	512.1	513.8	517.7	519.9	513.6	511.1	501.7	498.9	504.5	516.2	517.2	517.2
Laundries, cleaning and dyeing plants.....	108.9	110.0	109.7	108.6	108.9	108.9	107.6	108.1	107.7	108.0	107.3	108.1	107.9	107.2	107.2
Motion pictures.....	166.1	166.4	172.2	176.6	184.2	181.1	177.6	171.2	170.2	162.4	160.1	162.6	176.3	186.5	186.5
Motion picture filming and distributing.....	40.0	38.6	39.6	37.2	38.2	36.4	34.3	33.0	32.9	35.0	35.8	37.7	39.4	46.8	46.8
Motion picture theaters and services.....	126.1	127.8	132.6	139.4	146.0	144.7	143.3	138.2	137.3	127.4	124.3	124.9	136.9	139.7	139.7
Medical services.....	1,318.7	1,320.0	1,316.7	1,310.8	1,312.0	1,312.0	1,312.0	1,302.9	1,290.7	1,289.0	1,287.1	1,280.4	1,268.5	1,246.7	1,188.9
Hospitals.....	9,933	9,787	9,751	9,547	9,139	9,170	9,506	9,546	9,542	9,541	9,516	9,444	9,188	8,828	8,828
<b>Government.....</b>	2,326	2,482	2,342	2,342	2,367	2,375	2,365	2,340	2,344	2,334	2,332	2,327	2,340	2,270	2,270
Federal Government <sup>3</sup> .....	2,451.8	2,312.6	2,313.5	2,312.4	2,337.0	2,344.5	2,334.4	2,311.0	2,314.7	2,304.3	2,302.3	2,297.5	2,310.6	2,250.9	2,250.9
Executive.....	939.7	940.1	941.5	943.0	951.3	953.9	951.5	949.9	951.9	951.8	951.8	951.8	951.8	951.8	951.8
Department of Defense.....	738.0	593.3	588.5	586.3	588.7	588.7	585.7	582.8	583.3	582.2	580.6	582.5	597.2	596.7	596.7
Post Office Department.....	774.1	779.2	783.5	783.1	797.0	801.9	797.2	778.3	779.5	770.3	764.7	755.9	750.2	710.5	710.5
Other agencies.....	24.2	24.1	24.1	24.3	24.5	24.6	24.4	23.7	23.8	23.8	23.8	23.8	23.7	23.2	23.2
Legislative.....	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6
Judicial.....	7,446	7,451	7,445	7,408	7,205	6,772	6,795	7,141	7,206	7,198	7,207	7,184	7,117	6,849	6,548
State and local government <sup>4</sup> .....	1,868.2	1,868.6	1,858.1	1,801.6	1,744.8	1,751.7	1,790.7	1,808.7	1,805.0	1,803.6	1,800.0	1,786.8	1,726.4	1,663.6	1,663.6
State government.....	674.2	678.4	663.9	591.1	521.3	528.3	588.0	634.8	631.9	636.5	627.6	619.2	567.7	530.8	530.8
State education.....	1,194.0	1,190.2	1,194.2	1,210.5	1,223.5	1,223.4	1,202.7	1,173.9	1,173.1	1,167.1	1,172.4	1,167.6	1,158.8	1,132.8	1,132.8
Local government.....	5,582.6	5,576.2	5,549.4	5,403.4	5,026.7	5,043.3	5,349.9	5,397.3	5,393.2	5,403.2	5,383.6	5,330.2	5,122.1	4,884.5	4,884.5
Local education.....	3,229.4	3,225.9	3,197.3	3,023.4	2,590.7	2,601.1	2,961.7	3,076.3	3,087.4	3,110.2	3,095.5	3,050.0	2,832.3	2,644.2	2,644.2
Other local government.....	2,353.2	2,350.3	2,352.1	2,380.0	2,436.0	2,442.2	2,388.2	2,321.0	2,305.8	2,293.0	2,288.1	2,280.2	2,289.8	2,240.3	2,240.3

<sup>1</sup> Beginning with the October 1963 issue, figures differ from those previously published. The industry series have been adjusted to March 1962 benchmarks (comprehensive counts of employment). For comparable back data, see *Employment and Earnings Statistics for the United States, 1909-62* (BLS Bulletin 1312-1). Statistics from April 1962 forward are subject to further revision when new benchmarks become available.

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 ending nearest the 15th of the month. Therefore, persons who worked in more than 1 establishment during the reporting period are counted more than once. Proprietors, self-employed persons, unpaid family workers, and domestic servants are excluded.

<sup>2</sup> Preliminary.

<sup>3</sup> Data relate to civilian employees who worked on, or received pay for, the last day of the month.

<sup>4</sup> State and local government data exclude, as nominal employees, elected officials of small local units and paid volunteer firemen.

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics for all series except those for the Federal Government, which is prepared by the U.S. Civil Service Commission, and that for Class I railroads, which is prepared by the U.S. Interstate Commerce Commission.



TABLE A-3. Production or nonsupervisory workers in nonagricultural establishments, by industry<sup>1</sup>

[In thousands]

Revised series: see box, p. 348.

Industry	1964	1963												Annual average	
	Jan. <sup>2</sup>	Dec. <sup>2</sup>	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	Jan.	1962	1961
<b>Mining</b> .....	493	498	499	504	508	505	512	506	496	481	482	485	514	532	
Metal mining.....	68.2	69.5	69.9	70.5	70.2	70.1	69.8	68.9	67.3	64.5	64.9	63.2	67.9	71.7	
Iron ores.....	22.3	23.6	23.6	23.9	24.1	24.0	23.1	22.6	20.5	19.2	19.0	17.6	21.3	22.3	
Copper ores.....	22.9	22.8	22.6	22.7	22.4	22.3	22.7	22.9	23.4	22.9	22.9	22.9	23.4	23.8	
Coal mining.....	120.9	120.0	119.9	118.7	119.0	111.5	122.3	124.0	125.8	124.7	129.8	130.6	133.4	141.8	
Bituminous.....	110.9	109.9	110.1	109.3	109.6	101.3	112.7	114.3	116.1	114.9	119.7	120.5	123.0	129.3	
Crude petroleum and natural gas.....	209.2	206.8	204.2	209.4	211.7	215.6	214.5	210.4	205.2	204.5	203.8	205.1	214.0	218.8	
Crude petroleum and natural gas fields.....	93.1	93.3	93.3	95.3	97.8	98.5	98.1	95.8	95.9	96.1	96.6	96.7	99.7	104.5	
Oil and gas field services.....	116.1	113.5	110.9	114.1	113.9	117.1	116.4	114.6	109.3	108.4	107.2	108.4	114.3	114.3	
Quarrying and nonmetallic mining.....	95.1	101.7	104.9	105.6	106.7	107.3	105.8	102.7	97.7	87.3	83.5	86.4	98.6	99.5	
<b>Contract construction</b> .....	2,478	2,722	2,879	2,921	2,977	2,906	2,777	2,600	2,398	2,114	2,029	2,142	2,468	2,390	
General building contractors.....	753.1	840.0	879.4	895.0	923.9	902.0	855.3	787.7	735.4	641.5	613.9	653.3	754.9	752.6	
Heavy construction.....	458.6	554.0	626.8	645.0	656.4	639.3	613.1	558.6	474.0	376.1	346.2	372.8	515.3	505.7	
Highway and street construction.....	225.2	296.4	353.4	365.5	370.9	359.3	345.4	309.8	243.5	173.4	151.9	167.8	267.7	261.2	
Other heavy construction.....	233.4	257.6	273.4	279.5	285.5	280.0	267.7	248.8	230.5	202.7	194.3	205.0	247.6	244.5	
Special trade contractors.....	1,261.3	1,328.4	1,372.3	1,381.3	1,397.0	1,364.6	1,308.6	1,253.5	1,188.5	1,096.7	1,069.3	1,115.8	1,197.5	1,131.3	
<b>Manufacturing</b> .....	12,504	12,666	12,756	12,895	12,923	12,705	12,571	12,652	12,526	12,426	12,344	12,276	12,286	12,494	12,085
Durable goods.....	7,088	7,154	7,180	7,204	7,193	6,995	7,056	7,138	7,083	7,010	6,919	6,884	6,896	6,946	6,620
Nondurable goods.....	5,416	5,512	5,576	5,691	5,730	5,710	5,515	5,514	5,443	5,416	5,425	5,392	5,390	5,548	5,464
<b>Durable goods</b> .....															
Ordnance and accessories.....	118.3	118.8	119.4	120.0	119.3	118.0	118.2	118.4	118.1	117.5	119.8	120.3	121.4	119.7	106.8
Ammunition, except for small arms.....	69.1	69.4	69.3	69.5	69.0	67.8	67.6	67.0	66.4	65.7	67.3	67.8	68.0	68.2	58.9
Sighting and fire control equipment.....	9.6	9.7	9.9	10.1	10.5	10.7	11.4	11.8	12.4	12.8	13.0	13.0	13.4	13.5	14.8
Other ordnance and accessories.....	39.6	39.8	40.4	40.6	40.2	39.7	39.9	40.0	39.9	39.4	39.7	39.5	40.0	38.0	33.1
Lumber and wood products, except furniture.....	503.6	521.2	534.2	542.7	551.0	547.1	527.5	522.9	532.9	511.0	500.5	496.0	500.9	526.2	518.4
Logging camps and logging contractors.....	69.6	76.1	81.2	84.3	87.5	85.1	78.0	73.3	77.3	68.9	66.5	67.9	69.9	78.2	78.7
Sawmills and planing mills.....	218.9	227.3	232.7	235.6	239.3	241.0	234.4	233.4	235.3	227.0	223.3	220.3	222.5	233.0	233.5
Millwork, plywood, and related products.....	129.2	130.8	133.0	134.3	135.1	131.6	126.9	126.7	132.0	128.7	125.3	124.0	124.9	128.6	120.9
Wooden containers.....	30.5	31.4	31.2	31.8	32.4	33.3	33.3	33.4	32.8	31.9	31.1	30.8	30.9	33.0	34.7
Miscellaneous wood products.....	55.4	55.6	56.1	56.7	56.7	56.1	54.9	56.1	55.5	54.5	54.3	53.0	52.7	53.5	50.7
Furniture and fixtures.....	324.6	329.9	332.0	333.7	333.3	331.0	321.3	322.5	317.3	317.8	317.7	316.7	319.0	319.7	303.9
Household furniture.....	246.3	249.2	249.8	250.1	248.1	245.7	239.9	240.0	237.4	238.7	238.0	236.4	236.1	235.7	223.5
Office furniture.....	21.4	21.6	21.9	21.8	21.8	21.7	20.5	21.3	20.9	21.2	21.4	21.5	22.7	22.3	21.0
Partitions, office and store fixtures.....	27.1	28.3	29.6	30.9	31.1	30.4	29.3	28.4	28.0	28.7	29.0	29.0	29.8	30.5	28.2
Other furniture and fixtures.....	30.9	32.2	32.3	32.1	32.5	32.5	31.5	31.9	30.6	29.9	29.6	29.8	30.4	31.3	31.2
Stone, clay, and glass products.....	468.0	486.7	500.9	504.1	510.3	516.3	512.1	508.1	496.7	482.4	457.7	447.2	451.8	479.1	469.4
Flat glass.....	26.1	26.5	25.9	25.6	25.2	24.5	24.5	24.3	24.2	23.6	23.9	24.2	25.2	25.5	
Glass and glassware, pressed or blown.....	96.2	98.5	98.4	100.5	101.2	100.6	100.1	98.0	96.9	95.0	93.6	91.8	93.2	89.5	
Cement, hydraulic.....	28.1	29.9	31.7	32.5	33.7	34.4	34.4	34.0	32.7	31.8	28.4	27.5	29.1	32.1	32.3
Structural clay products.....	53.0	57.1	58.3	58.4	59.8	61.4	60.9	60.7	59.6	57.4	54.1	53.0	54.0	58.3	60.2
Pottery and related products.....	37.9	38.7	38.3	38.3	38.1	37.8	37.1	36.9	37.1	37.2	36.4	36.0	36.2	37.2	36.4
Concrete, gypsum, and plaster products.....	122.0	130.1	139.2	142.8	145.0	147.8	147.6	145.6	139.8	131.1	118.2	112.4	114.7	128.9	124.7
Other stone and mineral products.....	88.8	90.7	90.9	90.5	90.8	91.8	91.2	90.5	89.3	88.0	86.1	85.2	85.9	88.8	86.8
<b>Primary metal industries</b> .....	944.6	941.4	928.3	929.1	942.0	945.6	970.0	984.4	969.6	952.6	929.2	914.1	899.8	935.8	914.6
Blast furnace and basic steel products.....	471.4	467.1	458.9	461.9	472.2	482.6	505.0	513.0	503.1	488.7	468.6	454.5	439.8	475.5	478.4
Iron and steel foundries.....	173.3	173.1	171.3	169.8	171.4	166.0	168.3	170.4	168.6	167.4	165.2	164.5	163.7	163.7	156.6
Nonferrous smelting and refining.....	53.6	53.9	53.9	53.8	54.2	54.2	54.3	54.0	52.8	52.2	51.4	51.1	51.5	52.6	51.0
Nonferrous rolling, drawing, and extruding.....	140.9	141.1	139.2	139.0	138.9	139.5	138.7	141.8	140.0	138.8	138.3	138.0	138.3	139.1	132.5
Nonferrous foundries.....	59.4	59.7	59.1	58.8	59.2	58.4	58.8	59.3	59.2	59.3	59.4	59.5	59.7	58.1	52.3
Miscellaneous primary metal industries.....	46.0	46.5	45.9	45.8	46.1	44.9	44.9	45.9	45.9	46.2	46.3	46.5	46.8	46.7	43.7
<b>Fabricated metal products</b> .....	899.8	903.6	907.4	912.6	909.0	889.2	878.7	893.9	880.0	867.6	855.4	853.6	857.2	863.8	826.0
Metal cans.....	50.7	50.3	51.3	51.6	53.8	55.3	54.7	54.4	52.8	51.8	49.8	48.5	47.7	51.2	51.1
Cutlery, handtools, and general hardware.....	112.2	112.0	111.1	109.6	108.1	103.2	101.4	106.4	105.6	105.9	105.9	106.5	107.0	106.2	99.8
Heating equipment and plumbing fixtures.....	59.2	59.6	59.6	59.9	60.1	59.5	58.3	57.9	56.8	55.9	55.8	55.7	54.6	55.6	54.0
Fabricated structural metal products.....	236.8	239.3	244.6	249.1	253.5	252.7	247.7	245.9	239.0	230.7	224.1	223.1	226.0	234.7	235.6
Screw machine products, bolts, etc.....	70.3	69.7	69.4	69.7	70.1	69.6	68.7	70.1	69.8	69.7	70.1	70.2	69.9	69.4	64.1
Metal stampings.....	167.4	168.4	168.3	167.7	161.0	150.1	151.3	159.4	158.9	157.4	155.7	155.9	158.9	153.8	142.0
Coating, engraving, and allied services.....	60.0	60.9	61.4	61.8	60.6	58.5	57.4	58.3	57.6	56.9	55.3	55.4	55.5	56.1	51.8
Miscellaneous fabricated wire products.....	47.7	47.8	47.1	47.8	46.9	46.3	45.4	46.3	45.8	45.5	45.4	45.0	45.1	45.1	41.9
Miscellaneous fabricated metal products.....	95.5	95.6	94.6	95.4	94.9	94.0	93.8	95.2	93.7	93.8	93.3	93.3	92.5	91.8	85.7

See footnotes at end of table.

TABLE A-3. Production or nonsupervisory workers in nonagricultural establishments, by industry<sup>1</sup>—Continued

[In thousands]

Revised Series; see box, p. 348.

Industry	1964		1963												Annual average	
	Jan. <sup>2</sup>	Dec. <sup>3</sup>	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	Jan.	1962	1961	
<b>Manufacturing—Continued</b>																
<i>Durable goods—Continued</i>																
Machinery.....	1,083.0	1,077.6	1,059.3	1,056.5	1,055.1	1,043.8	1,040.9	1,054.8	1,052.1	1,055.5	1,050.8	1,046.1	1,043.2	1,036.0	976.7	
Engines and turbines.....	58.3	57.6	57.1	56.8	57.2	56.2	55.6	55.4	55.4	56.7	56.7	56.9	57.5	55.7	50.3	
Farm machinery and equipment.....	87.3	84.3	83.6	83.6	81.3	84.1	86.7	89.6	91.9	91.9	90.4	86.4	80.5	76.2		
Construction and related machinery.....	148.5	147.3	145.6	145.4	146.4	144.8	142.7	144.1	141.6	141.0	140.2	139.4	139.6	139.6	129.9	
Metalworking machinery and equipment.....	211.5	210.0	204.6	203.4	201.7	199.9	199.1	202.4	201.3	201.4	199.5	199.2	197.9	195.4	182.9	
Special industry machinery.....	117.3	116.7	115.8	115.0	115.2	113.6	113.8	115.6	115.3	116.0	115.4	114.9	115.5	116.8	111.0	
General industrial machinery.....	155.5	155.9	153.0	153.6	154.7	153.5	153.3	153.8	152.8	153.2	153.3	153.1	154.3	153.8	146.6	
Office, computing, and accounting machines.....	89.9	91.3	89.7	90.4	89.9	89.0	88.5	89.8	90.3	92.1	93.0	93.5	94.9	97.4	96.3	
Service industry machines.....	68.5	68.3	68.0	68.3	67.5	66.8	68.7	70.7	71.3	69.8	68.0	67.3	66.2	69.0	64.7	
Miscellaneous machinery.....	143.2	143.2	141.2	140.0	138.9	138.7	135.1	136.3	134.5	133.4	132.8	131.4	130.9	128.0	117.0	
Electrical equipment and supplies.....	1,050.9	1,059.5	1,064.7	1,073.5	1,067.4	1,048.3	1,040.2	1,056.8	1,048.8	1,047.7	1,049.9	1,057.7	1,069.1	1,060.2	980.5	
Electric distribution equipment.....	110.0	112.8	112.8	111.4	112.1	112.8	111.1	111.4	110.8	110.9	110.4	111.1	112.3	111.3	106.7	
Electrical industrial apparatus.....	129.0	128.6	128.6	128.5	128.8	128.0	128.1	128.5	127.8	127.3	126.5	127.1	127.3	126.7	119.1	
Household appliances.....	122.4	123.5	125.1	124.0	122.0	117.9	116.2	119.1	117.8	116.5	113.9	114.6	114.9	114.8	112.9	
Electric lighting and wiring equipment.....	119.1	119.8	120.8	121.1	119.8	117.1	113.6	115.0	113.4	114.4	114.4	114.3	114.0	111.6	105.1	
Radio and TV receiving sets.....	84.5	88.6	93.1	95.6	93.7	91.1	86.0	84.8	78.7	75.2	76.4	77.6	79.9	82.8	75.4	
Communication equipment.....	210.4	210.8	208.3	214.7	214.8	214.8	214.3	218.8	221.9	226.2	230.3	233.5	236.6	230.4	209.0	
Electronic components and accessories.....	192.3	191.5	192.7	193.6	192.7	194.0	189.4	194.9	194.3	193.8	194.6	194.9	197.9	198.8	176.7	
Miscellaneous electrical equipment and supplies.....	83.2	83.9	83.3	84.6	83.5	72.6	81.5	84.4	84.1	83.4	83.4	84.7	86.2	84.0	75.7	
Transportation equipment.....	1,159.5	1,162.7	1,157.0	1,149.2	1,124.8	984.1	1,098.9	1,121.1	1,120.7	1,118.0	1,104.4	1,104.8	1,112.5	1,060.7	997.1	
Motor vehicles and equipment.....	610.0	612.0	607.8	599.2	583.8	449.6	564.8	581.2	580.5	574.6	563.6	567.2	576.4	534.1	479.7	
Aircraft and parts.....	368.4	368.1	363.1	361.1	356.5	351.0	349.6	352.1	350.3	353.3	352.8	354.7	358.8	350.6	351.5	
Ship and boat building and repairing.....	114.4	114.6	117.9	119.1	117.0	118.4	118.8	121.0	126.3	127.1	127.5	124.0	122.8	118.6	117.6	
Railroad equipment.....	36.7	36.1	36.3	34.1	33.0	33.4	33.8	33.6	32.3	31.7	30.9	29.3	29.9	29.9	24.0	
Other transportation equipment.....	31.3	32.1	33.5	33.4	32.1	32.1	32.1	33.0	32.0	30.7	28.8	28.0	25.2	27.6	24.3	
Instruments and related products.....	235.9	240.2	240.6	240.2	239.9	239.5	236.6	238.8	234.8	234.5	233.1	232.4	232.3	230.4	223.1	
Engineering and scientific instruments.....	38.4	38.5	38.5	38.5	38.4	38.5	38.2	39.2	38.8	38.9	39.4	39.3	40.1	39.3	40.7	
Mechanical measuring and control devices.....	64.0	64.7	63.0	62.7	63.1	63.4	63.7	64.0	63.3	63.7	63.7	63.7	63.3	62.1	58.7	
Optical and ophthalmic goods.....	29.9	30.4	30.6	30.3	30.2	29.4	29.3	29.8	29.5	29.6	29.5	29.5	29.1	29.6	29.1	
Surgical, medical, and dental equipment.....	37.5	37.6	37.9	37.8	37.9	37.8	36.8	37.6	37.4	37.2	36.8	36.6	36.1	34.9	33.4	
Photographic equipment and supplies.....	44.4	44.5	44.7	44.6	44.3	45.1	44.2	43.7	42.3	41.8	41.2	41.1	41.3	41.6	40.2	
Watches and clocks.....	24.6	25.9	26.3	26.0	25.3	24.4	24.5	24.5	23.5	23.3	22.5	22.2	22.4	22.9	20.9	
Miscellaneous manufacturing industries.....	300.1	312.5	336.6	342.1	341.2	331.9	311.7	316.3	312.0	304.9	300.3	294.6	288.6	314.6	303.5	
Jewelry, silverware, and plated ware.....	33.3	33.7	34.0	33.8	33.3	32.3	29.7	32.0	31.9	32.3	31.9	32.4	32.3	32.0	33.2	
Toys, amusement and sporting goods.....	79.7	98.3	105.1	102.9	98.7	88.7	88.2	87.1	80.1	75.5	70.1	65.4	65.5	85.5	81.6	
Pens, pencils, office and art materials.....	25.0	25.1	24.5	24.6	24.3	23.7	24.3	24.1	23.8	23.6	22.9	22.8	22.8	23.2	22.1	
Costume jewelry, buttons, and notions.....	47.4	48.5	48.8	50.0	50.0	47.0	48.2	46.4	45.6	46.3	46.6	46.1	48.0	46.8		
Other manufacturing industries.....	123.5	126.7	130.7	129.9	130.4	126.6	122.6	123.6	122.5	123.1	123.0	122.6	122.0	125.0	119.8	
<i>Nondurable goods</i>																
Food and kindred products.....	1,088.0	1,127.3	1,168.8	1,248.0	1,285.3	1,271.5	1,188.2	1,145.8	1,097.7	1,080.5	1,080.9	1,072.0	1,093.5	1,175.5	1,191.4	
Meat products.....	246.9	251.5	253.3	253.9	253.3	262.4	250.6	247.5	243.0	240.3	239.0	241.3	244.6	251.6	256.8	
Dairy products.....	138.1	139.3	140.9	143.6	147.7	153.4	154.9	153.6	147.3	145.4	143.0	142.0	142.4	152.2	161.4	
Canned and preserved food, except meats.....	164.0	191.2	259.7	314.9	301.5	225.0	189.4	165.6	159.8	159.8	152.9	158.8	214.9	211.7		
Grain mill products.....	90.5	90.2	90.3	94.2	95.1	95.6	94.2	91.9	88.9	89.6	89.1	89.8	91.5	91.4		
Bakery products.....	166.8	168.0	169.4	170.7	170.0	171.4	172.1	170.9	167.3	165.9	167.2	166.9	166.5	168.4	169.1	
Sugar.....	39.9	43.5	41.2	26.4	24.4	23.8	24.0	24.0	22.5	22.5	23.9	30.4	29.4	30.3		
Confectionery and related products.....	62.5	66.6	67.9	67.9	65.4	61.0	55.0	57.4	55.7	56.1	59.7	60.1	61.1	60.1	60.4	
Beverages.....	106.9	112.4	114.0	117.2	115.7	117.8	118.8	116.5	111.2	109.1	107.1	102.6	105.9	111.7	113.9	
Miscellaneous food and kindred products.....	92.6	95.4	98.3	99.6	96.8	93.5	92.4	92.3	91.7	92.5	93.0	94.2	94.0	95.8	96.5	
Tobacco manufactures.....	79.3	83.0	87.1	93.9	94.8	87.8	63.1	63.8	64.8	66.9	68.8	74.1	77.2	79.1	79.6	
Cigarettes.....	32.0	31.7	31.7	32.2	31.9	31.5	31.5	31.0	31.0	31.2	31.2	31.0	31.3	31.4	32.4	
Cigars.....	21.7	22.3	22.1	21.8	21.4	20.4	21.2	21.2	21.2	21.4	21.6	21.6	21.5	22.2	23.6	
Textile mill products.....	783.6	795.3	802.0	804.4	802.7	803.1	791.6	802.5	796.0	795.3	793.6	790.1	790.1	812.4	805.0	
Cotton broad woven fabrics.....	215.8	217.0	216.2	216.7	216.5	216.5	215.2	215.8	215.4	215.6	216.3	216.4	218.1	223.4	227.7	
Silk and synthetic broad woven fabrics.....	76.9	77.3	76.9	76.0	75.5	75.7	74.3	75.4	74.5	74.0	73.8	73.9	74.3	73.9	74.7	
Weaving and finishing broad woolsens.....	40.7	40.3	40.1	41.4	41.9	43.1	43.6	44.5	44.4	44.7	45.0	44.9	43.2	45.9	45.8	
Narrow fabrics and smallwares.....	23.7	23.9	24.0	24.1	23.9	23.7	22.8	23.8	23.6	23.5	23.4	23.4	23.4	24.2	23.2	
Knitting.....	178.8	186.3	194.3	197.3	197.4	197.4	194.8	196.7	194.0	192.2	191.0	187.6	185.7	198.1	193.8	
Finishing textiles, except wool and knit.....	64.7	64.5	64.4	63.6	63.6	63.5	62.8	63.6	63.2	63.6	63.4	63.3	63.4	64.3	63.1	
Floor covering.....	32.0	32.3	32.2	31.5	31.4	30.6	30.6	30.7	31.4	31.4	31.3	31.7	32.0	31.2	30.0	
Yarn and thread.....	97.4	98.6	97.9	97.3	97.2	97.3	93.5	96.6	95.2	94.9	94.4	94.4	94.2	95.6	91.9	
Miscellaneous textile goods.....	54.2	55.4	55.9	55.8	55.2	54.5	54.0	55.5	55.0	55.4	55.0	54.5	55.6	55.9	54.8	

See footnotes at end of table.

TABLE A-3. Production or nonsupervisory workers in nonagricultural establishments, by industry<sup>1</sup>—Continued

[In thousands]

Revised series; see box, p. 348.

Industry	1964												1963		Annual average	
	Jan. <sup>2</sup>	Dec. <sup>2</sup>	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	Jan.	1962	1961	
Manufacturing—Continued																
Nondurable goods—Continued																
Apparel and related products.....	1,131.9	1,150.2	1,161.0	1,180.3	1,179.6	1,182.9	1,132.9	1,139.6	1,141.7	1,135.3	1,157.2	1,141.2	1,109.0	1,125.4	1,079.6	
Men's and boys' suits and coats.....	103.8	102.8	100.8	101.3	103.7	104.5	102.0	106.2	105.4	103.9	105.1	105.4	105.6	104.9	102.4	
Men's and boys' furnishings.....	291.7	295.7	298.8	302.6	304.9	309.4	299.8	303.3	300.2	297.3	294.1	292.6	290.1	289.6	268.4	
Women's, misses', and juniors' outerwear.....	346.6	349.3	348.5	355.9	356.7	361.2	342.6	336.8	346.1	349.0	364.2	356.0	335.0	342.2	331.8	
Women's and children's undergarments.....	104.1	107.7	111.9	111.2	109.1	107.0	99.9	102.5	102.5	102.8	102.8	102.1	101.1	103.1	101.5	
Hats, caps, and millinery.....	27.6	26.5	29.1	28.9	30.6	28.6	27.0	26.0	27.3	31.9	31.3	29.2	29.2	29.2	29.0	
Girls' and children's outerwear.....	74.5	70.3	70.2	71.3	70.9	72.6	72.4	73.6	71.1	66.9	72.6	72.4	69.3	70.2	68.0	
Fur goods and miscellaneous apparel.....	61.8	66.1	68.2	67.5	65.5	62.8	62.9	61.4	61.2	62.1	60.3	58.3	63.9	61.9	61.9	
Miscellaneous fabricated textile products.....	129.8	135.0	138.2	140.7	137.9	132.1	124.8	127.3	129.0	126.9	124.4	121.1	120.4	122.4	116.7	
Paper and allied products.....	486.3	490.9	491.7	492.7	495.1	495.4	487.1	491.5	484.3	483.0	482.3	479.6	482.7	486.0	478.0	
Paper and pulp.....	171.1	172.9	172.6	173.1	174.4	176.8	174.5	175.6	172.1	171.3	170.5	170.8	172.4	175.2	177.6	
Paperboard.....	54.4	54.2	54.3	54.2	54.3	54.6	54.1	54.3	54.1	53.1	53.7	53.6	54.0	52.9	53.6	
Converted paper and paperboard products.....	110.2	111.6	111.2	111.8	113.4	112.5	109.6	110.1	109.2	109.9	109.7	108.2	108.2	108.5	104.3	
Paperboard containers and boxes.....	150.6	152.2	153.6	153.6	153.0	151.5	148.9	151.5	148.9	148.7	148.4	147.0	148.1	149.4	142.6	
Printing, publishing, and allied industries.....	594.7	602.4	598.2	599.3	597.2	592.4	588.9	592.4	589.8	588.4	579.3	575.5	578.1	594.0	591.7	
Newspaper publishing and printing.....	164.2	166.9	165.1	165.6	164.6	163.7	163.5	163.9	163.1	161.7	151.9	150.9	151.2	166.5	168.2	
Periodical publishing and printing.....	27.4	27.6	27.8	27.6	27.6	28.8	28.0	27.0	27.9	28.6	28.9	28.8	28.8	28.5	29.5	
Books.....	46.4	45.1	45.6	46.3	45.7	44.3	44.3	45.2	45.0	44.7	44.3	44.2	44.2	44.3	43.1	
Commercial printing.....	237.0	239.7	238.4	237.6	235.5	232.6	231.9	233.2	232.5	232.2	233.7	231.6	233.7	233.8	232.2	
Bookbinding and related industries.....	39.7	40.2	39.9	40.7	41.2	41.9	41.6	41.5	40.8	40.4	39.9	39.3	39.7	39.6	38.5	
Other publishing and printing industries.....	79.5	81.8	82.1	82.0	82.0	81.7	81.2	81.6	80.5	80.8	80.6	80.7	80.5	81.4	80.3	
Chemicals and allied products.....	520.0	522.1	522.4	526.1	527.3	527.5	524.7	527.3	530.0	531.9	521.5	515.9	513.8	517.2	504.3	
Industrial chemicals.....	163.1	162.9	163.0	163.1	164.3	165.8	165.5	166.5	165.1	164.8	163.9	163.0	163.3	165.0	163.3	
Plastics and synthetics, except glass.....	117.3	116.9	116.2	116.1	115.8	115.5	115.1	115.0	113.5	111.3	110.7	111.0	111.7	110.0	103.6	
Drugs.....	62.7	63.6	63.5	63.2	63.3	63.8	63.4	63.2	62.5	62.2	61.5	61.4	61.1	60.0	59.1	
Soap, cleaners, and toilet goods.....	58.9	60.3	61.1	63.2	62.8	62.0	60.1	59.7	58.7	59.3	59.6	59.3	58.9	58.6	56.7	
Paints, varnishes, and allied products.....	35.7	36.2	36.3	36.6	37.1	38.0	38.1	37.6	36.8	36.4	35.6	35.2	34.9	36.0	35.4	
Agricultural chemicals.....	32.8	31.6	30.9	32.2	31.4	29.5	29.1	32.3	40.3	44.9	37.4	33.4	31.5	32.9	32.2	
Other chemical products.....	49.5	50.6	51.4	51.7	52.6	52.9	53.4	53.0	53.1	53.0	52.8	52.6	52.4	54.6	54.0	
Petroleum refining and related industries.....	113.4	115.7	117.9	120.0	121.4	123.8	122.1	121.7	120.6	119.1	117.4	117.3	116.9	125.3	129.0	
Petroleum refining.....	93.3	93.4	93.6	94.3	95.3	96.5	95.7	95.5	95.2	95.8	96.1	95.5	94.3	100.9	106.1	
Other petroleum and coal products.....	20.1	22.3	24.3	25.7	26.1	26.8	26.4	26.2	25.4	23.3	21.3	21.8	22.6	24.3	23.8	
Rubber and miscellaneous plastic products.....	313.1	316.3	318.4	317.0	314.9	310.1	306.7	319.1	317.0	315.2	313.9	313.1	318.9	314.3	288.3	
Tires and inner tubes.....	67.0	68.3	67.0	64.8	64.5	64.0	68.9	71.9	71.5	71.4	71.3	71.4	72.3	72.1	70.6	
Other rubber products.....	126.4	126.8	128.0	127.2	126.5	124.6	120.8	127.3	126.2	125.9	126.1	126.5	129.1	126.6	116.6	
Miscellaneous plastic products.....	119.7	121.2	123.4	125.0	123.9	121.5	117.0	119.9	119.3	117.9	116.5	115.2	117.5	115.6	101.1	
Leather and leather products.....	305.3	309.1	308.7	309.1	311.2	316.0	309.3	309.8	301.4	300.5	310.0	312.7	310.0	318.6	316.4	
Leather tanning and finishing.....	25.9	27.9	27.8	27.6	27.5	27.6	26.8	27.7	27.0	26.8	27.0	27.5	28.1	28.0	28.3	
Footwear, except rubber.....	212.6	210.7	207.6	205.8	208.4	213.0	210.5	210.3	206.6	206.2	211.5	214.0	213.2	215.7	214.0	
Other leather products.....	66.8	70.5	73.3	75.7	75.3	75.4	72.0	71.8	67.8	67.5	71.5	71.2	68.7	74.9	74.1	
Transportation and public utilities:																
Local and interurban passenger transit:																
Local and suburban transportation.....	83.0	83.3	83.6	83.6	82.6	82.7	83.3	83.9	83.0	83.7	83.9	84.3	86.3	93.3	93.3	
Intercity and rural buslines.....	38.3	38.1	38.7	40.0	40.6	40.6	39.8	38.5	37.5	36.8	36.8	38.2	38.5	38.2	38.2	
Motor freight transportation and storage.....	828.0	840.0	850.8	851.0	838.9	837.9	829.6	796.0	787.2	777.9	775.9	773.7	803.9	772.9	772.9	
Pipeline transportation.....	16.6	16.7	16.8	17.2	17.6	17.6	17.6	17.1	17.2	17.2	17.1	17.4	18.2	18.7	18.7	
Communication:																
Telephone communication.....	549.4	548.9	555.2	557.3	564.4	566.5	559.5	555.3	554.1	552.8	551.9	552.5	559.5	567.5	567.5	
Telegraph communication.....	23.5	23.3	23.5	23.8	23.9	24.1	24.3	24.7	24.9	25.1	25.3	25.7	26.9	27.2	27.2	
Radio and television broadcasting.....	85.4	84.7	85.1	85.7	85.3	84.4	83.6	81.5	81.3	81.2	80.9	80.4	79.9	79.5	79.5	
Electric, gas, and sanitary services:																
Electric companies and systems.....	531.4	532.4	533.1	539.3	548.0	547.8	541.3	529.5	526.4	528.5	528.8	530.2	537.1	541.3	541.3	
Gas companies and systems.....	209.7	209.7	209.9	212.2	215.0	214.9	213.0	207.8	205.6	209.2	209.2	209.3	211.4	213.6	213.6	
Combined utility systems.....	152.6	153.0	153.5	155.6	158.1	157.9	155.3	152.7	152.3	151.9	152.3	153.3	156.2	159.1	159.1	
Water, steam, and sanitary systems.....	33.5	33.8	33.8	34.1	35.0	35.0	34.3	33.6	33.3	32.4	32.1	32.1	32.0	29.9	29.9	

See footnotes at end of table.



TABLE A-3. Production or nonsupervisory workers in nonagricultural establishments, by industry<sup>1</sup>—Continued

[In thousands]

Revised series; see box below.

Industry	1964	1963												Annual average	
	Jan. <sup>2</sup>	Dec. <sup>3</sup>	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	Jan.	1962	1961
Wholesale and retail trade <sup>4</sup>		9,860	9,268	9,115	9,041	8,966	8,914	8,926	8,829	8,898	8,687	8,646	8,760	8,805	8,674
Wholesale trade		2,774	2,746	2,750	2,741	2,739	2,714	2,680	2,636	2,630	2,625	2,621	2,633	2,630	2,584
Motor vehicles and automotive equipment		201.1	201.1	200.6	200.6	201.3	201.8	201.0	198.3	197.1	196.3	195.5	194.3	192.8	184.7
Drugs, chemicals, and allied products		160.2	160.0	159.3	159.0	159.6	158.2	157.8	156.5	157.1	157.1	156.8	156.5	156.4	153.0
Dry goods and apparel		111.5	111.8	111.3	110.7	111.9	111.7	110.9	109.0	108.8	109.3	108.3	109.2	109.6	110.0
Groceries and related products		449.9	442.6	453.1	454.2	452.7	448.8	437.8	418.4	415.9	420.2	418.5	421.8	431.1	430.2
Electrical goods		197.3	196.5	198.1	198.2	200.1	199.3	197.9	197.0	196.7	195.6	195.5	195.3	191.0	185.0
Hardware, plumbing and heating goods		126.0	126.0	126.6	126.9	127.5	127.8	126.3	124.7	124.7	123.8	123.4	123.0	123.2	122.1
Machinery, equipment, and supplies		474.9	475.0	472.1	469.8	468.8	466.4	458.1	452.9	452.5	448.6	445.6	444.2	436.5	416.5
Retail trade <sup>4</sup>		7,086	6,522	6,365	6,300	6,227	6,200	6,246	6,193	6,268	6,062	6,025	6,127	6,175	6,090
General merchandise stores		2,022.9	1,662.5	1,551.2	1,513.3	1,466.3	1,448.7	1,469.4	1,453.0	1,480.1	1,401.2	1,379.6	1,453.4	1,496.8	1,453.9
Department stores		1,229.3	987.1	907.6	879.5	852.7	843.6	860.3	851.7	869.9	824.1	810.7	863.7	881.4	850.4
Limited price variety stores		387.2	318.6	305.9	302.2	286.8	283.1	288.2	289.2	304.2	283.2	276.8	287.8	304.1	303.2
Food stores		1,359.3	1,334.7	1,328.8	1,318.0	1,305.4	1,308.5	1,308.6	1,301.3	1,305.6	1,296.5	1,301.3	1,291.1	1,280.2	1,269.9
Grocery, meat, and vegetable stores		1,186.6	1,171.1	1,166.8	1,155.7	1,143.4	1,146.4	1,144.6	1,137.2	1,135.2	1,135.2	1,134.6	1,130.6	1,120.5	1,106.0
Apparel and accessories stores		684.5	580.0	561.7	555.1	531.6	525.2	552.1	550.5	568.0	528.8	519.7	545.6	560.3	556.3
Men's and boys' apparel stores		122.6	94.6	90.3	89.5	87.3	87.9	92.4	88.2	91.4	86.2	88.5	95.1	91.4	88.5
Women's ready-to-wear stores		253.4	219.2	212.7	208.6	202.7	197.2	207.1	208.4	217.9	201.6	194.9	203.2	209.0	209.1
Family clothing stores		115.3	90.8	86.1	85.1	80.3	81.0	84.4	83.4	86.0	82.0	81.6	87.3	88.9	88.8
Shoe stores		121.6	110.4	108.6	111.2	105.2	104.1	108.2	110.0	142.6	101.4	98.2	100.9	107.6	104.9
Furniture and appliance stores		364.3	356.1	353.2	349.5	349.0	347.3	346.7	343.8	344.0	345.3	343.8	346.8	347.2	349.4
Other retail trade		2,655.3	2,589.0	2,570.4	2,563.8	2,575.1	2,570.4	2,568.8	2,544.5	2,530.7	2,490.5	2,480.9	2,489.9	2,490.5	2,460.8
Motor vehicle dealers		596.2	592.6	590.9	589.8	592.2	591.7	589.1	585.2	582.2	580.8	579.7	577.3	559.9	552.0
Other vehicle and accessory dealers		151.0	146.6	141.6	142.3	144.4	143.8	143.6	140.0	137.9	132.0	130.0	130.0	129.6	124.7
Drug stores		374.8	358.9	352.9	352.5	351.6	350.8	348.8	349.6	349.7	348.5	346.7	350.0	348.0	344.5
Finance, insurance, and real estate:															
Banking		630.2	629.8	629.2	629.3	637.8	636.2	626.3	618.2	618.2	617.1	615.0	611.7	606.7	591.1
Security dealers and exchanges		113.6	113.5	113.4	113.3	115.2	115.6	114.3	113.4	112.9	113.6	113.0	112.2	122.3	120.6
Insurance carriers		779.4	779.0	777.0	778.7	787.2	783.8	775.3	772.6	770.9	773.4	771.4	768.5	768.0	765.2
Life insurance		420.6	420.0	419.1	419.8	422.9	420.8	416.4	415.6	414.8	416.2	415.1	413.8	413.0	417.1
Accident and health insurance		46.5	46.5	46.2	46.3	47.0	46.9	46.2	45.8	45.6	45.8	45.6	45.5	45.8	44.9
Fire, marine, and casualty insurance		276.3	276.7	275.8	276.9	280.8	279.8	277.1	276.1	275.6	276.1	275.6	274.1	273.9	268.3
Services and miscellaneous:															
Hotels and lodging places:															
Hotels, tourist courts, and motels		517.8	525.0	557.2	580.7	622.7	624.4	597.4	541.8	521.5	512.7	509.1	502.5	509.2	494.0
Personal services:															
Laundries, cleaning and dyeing plants		371.4	374.8	376.4	376.0	378.0	381.1	382.2	376.0	374.4	365.6	364.0	369.0	377.7	383.1
Motion pictures:															
Motion picture filming and distribution		25.9	24.8	24.8	23.7	23.9	23.6	22.6	21.6	20.8	21.6	22.1	23.7	24.6	29.1

<sup>1</sup> For comparability of data with those published in issues prior to October 1963, and coverage of these series, see footnote 1, table A-2.

For mining, manufacturing, and laundries, cleaning and dyeing plants, data refer to production and related workers; for contract construction, to construction workers; and for all other industries, to nonsupervisory workers.

Production and related workers include working foremen and all nonsupervisory workers (including leadman and trainees) engaged in fabricating, processing, assembling, inspection, receiving, storage, handling, packing, warehousing, shipping, maintenance, repair, janitorial and watchmen 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.

Construction workers include working foremen, journeymen, mechanics, apprentices, laborers, etc., engaged in new work, alterations, demolition, repair, and maintenance, etc., at the site of construction or working in shop or yards at jobs (such as precutting and preassembling) ordinarily performed by members of the construction trades.

Nonsupervisory workers include employees (not above the working supervisory level) such as office and clerical workers, repairmen, salespersons, operators, drivers, attendants, service employees, linemen, laborers, janitors, watchmen, and similar occupational levels, and other employees whose services are closely associated with those of the employees listed.

<sup>2</sup> Preliminary.

<sup>3</sup> Data relate to nonsupervisory employees except messengers.

<sup>4</sup> Excludes eating and drinking places.

### Caution

The revised series on employment, hours and earnings, and labor turnover in non-agricultural establishments should not be compared with those published in issues prior to October 1963. (See footnote 1, table A-2, and "Technical Note, Revision of Establishment Employment Statistics, 1963," appearing in the October 1963 *Monthly Labor Review*, p. 1194.) Moreover, when the figures are again adjusted to new benchmarks, the data presented in this issue should not be compared with those in later issues which reflect the adjustments.

Comparable data for earlier periods are published in *Employment and Earnings Statistics for the United States, 1909-62* (BLS Bulletin 1312-1), which is available at depository libraries or which may be purchased from the Superintendent of Documents for \$3.50. For an individual industry, earlier data may be obtained upon request to the Bureau.

TABLE A-4. Employees in nonagricultural establishments, by industry division and selected groups, seasonally adjusted<sup>1</sup>

[In thousands]

Revised series; see box, p. 348.

Industry division and group	1964		1963										
	Jan. <sup>2</sup>	Dec. <sup>2</sup>	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	Jan.
Total.....	57,834	57,747	57,580	57,646	57,453	57,344	57,340	57,194	57,060	56,873	56,706	56,458	56,333
Mining.....	625	629	630	629	632	635	640	639	640	639	631	631	631
Contract construction.....	3,008	3,077	3,057	3,066	3,071	3,083	3,069	3,046	3,019	3,005	2,928	2,920	2,967
Manufacturing.....	17,148	17,122	17,061	17,119	17,076	17,033	17,103	17,075	17,095	17,037	16,948	16,872	16,871
Durable goods.....	9,755	9,732	9,688	9,718	9,705	9,652	9,701	9,685	9,683	9,660	9,586	9,546	9,542
Ordinance and accessories.....	277	275	275	277	275	275	277	278	276	278	278	279	280
Lumber and wood products, except furniture.....	597	597	595	589	588	578	564	559	592	588	597	590	593
Furniture and fixtures.....	395	394	392	391	392	393	392	390	388	387	388	386	389
Stone, clay, and glass products.....	613	612	614	611	610	616	615	612	612	607	597	590	595
Primary metal industries.....	1,169	1,167	1,155	1,155	1,164	1,176	1,208	1,202	1,184	1,174	1,145	1,133	1,124
Fabricated metal products.....	1,172	1,168	1,162	1,164	1,165	1,162	1,159	1,156	1,151	1,148	1,136	1,131	1,125
Machinery.....	1,558	1,555	1,548	1,545	1,531	1,525	1,512	1,508	1,506	1,504	1,501	1,499	1,503
Electrical equipment and supplies.....	1,566	1,564	1,557	1,571	1,574	1,574	1,587	1,593	1,597	1,595	1,589	1,589	1,593
Transportation equipment.....	1,633	1,629	1,619	1,647	1,635	1,580	1,618	1,623	1,614	1,623	1,597	1,595	1,586
Instruments and related products.....	373	374	373	373	373	375	375	375	370	370	368	366	365
Miscellaneous manufacturing industries.....	402	397	398	395	398	378	394	389	393	390	390	388	389
Nondurable goods.....	7,393	7,390	7,373	7,401	7,371	7,381	7,402	7,390	7,412	7,377	7,362	7,326	7,329
Food and kindred products.....	1,742	1,741	1,733	1,742	1,723	1,728	1,730	1,732	1,743	1,738	1,757	1,747	1,752
Tobacco manufactures.....	92	91	95	89	86	91	87	88	89	90	89	89	89
Textile mill products.....	886	888	889	890	886	887	891	889	889	891	892	890	891
Apparel and related products.....	1,297	1,295	1,291	1,312	1,306	1,302	1,317	1,306	1,317	1,296	1,286	1,273	1,268
Paper and allied products.....	625	623	622	620	622	623	623	620	620	618	619	617	617
Printing, publishing, and allied industries.....	943	940	931	934	935	937	935	936	934	929	910	907	910
Chemicals and allied products.....	871	870	870	871	869	870	870	868	864	862	859	856	853
Petroleum refining and related industries.....	184	187	189	189	190	189	188	187	188	188	188	188	187
Rubber and miscellaneous plastic products.....	407	406	406	402	402	404	408	414	417	416	411	408	411
Leather and leather products.....	346	349	347	352	352	350	353	350	351	349	351	351	351
Transportation and public utilities.....	3,925	3,913	3,928	3,937	3,950	3,941	3,936	3,919	3,909	3,890	3,894	3,899	3,821
Wholesale and retail trade.....	12,009	11,956	11,941	11,935	11,922	11,907	11,884	11,864	11,825	11,784	11,795	11,729	11,685
Wholesale trade.....	3,204	3,192	3,176	3,173	3,170	3,155	3,159	3,148	3,129	3,119	3,106	3,093	3,085
Retail trade.....	8,805	8,764	8,765	8,762	8,752	8,752	8,725	8,716	8,696	8,665	8,689	8,636	8,600
Finance, insurance, and real estate.....	2,903	2,892	2,887	2,887	2,873	2,873	2,870	2,865	2,864	2,853	2,848	2,839	2,834
Service and miscellaneous.....	8,477	8,446	8,423	8,430	8,377	8,373	8,349	8,282	8,228	8,199	8,207	8,144	8,110
Government.....	9,739	9,712	9,653	9,643	9,552	9,499	9,489	9,504	9,480	9,466	9,455	9,424	9,414
Federal.....	2,352	2,349	2,347	2,352	2,347	2,348	2,351	2,349	2,345	2,339	2,340	2,332	2,353
State and local.....	7,387	7,363	7,306	7,291	7,205	7,151	7,138	7,155	7,135	7,127	7,115	7,092	7,061

<sup>1</sup> For coverage of the series, see footnote 1, table A-2.<sup>2</sup> Preliminary.NOTE: The seasonal adjustment method used is described in "New Seasonal Adjustment Factors for Labor Force Components," *Monthly Labor Review*, August 1960, pp. 822-827.TABLE A-5. Production workers in manufacturing industries, by major industry group, seasonally adjusted<sup>1</sup>

[In thousands]

Revised series; see box, p. 348.

Major industry group	1964		1963										
	Jan. <sup>2</sup>	Dec. <sup>2</sup>	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	Jan.
Manufacturing.....	12,672	12,654	12,590	12,649	12,611	12,575	12,650	12,628	12,647	12,604	12,521	12,455	12,453
Durable goods.....	7,146	7,129	7,081	7,110	7,097	7,051	7,103	7,086	7,081	7,070	6,994	6,956	6,950
Ordinance and accessories.....	118	118	117	120	119	119	119	120	119	118	119	120	121
Lumber and wood products, except furniture.....	537	535	532	526	525	517	503	498	530	528	538	531	533
Furniture and fixtures.....	329	328	325	325	326	326	326	325	323	322	322	321	323
Stone, clay, and glass products.....	493	495	495	491	490	496	498	493	492	489	480	474	476
Primary metal industries.....	945	943	932	931	939	953	984	977	962	952	922	911	900
Fabricated metal products.....	903	897	891	895	895	891	891	888	883	881	868	864	860
Machinery.....	1,085	1,082	1,074	1,074	1,061	1,058	1,045	1,042	1,040	1,041	1,038	1,038	1,045
Electrical equipment and supplies.....	1,045	1,045	1,041	1,051	1,049	1,051	1,061	1,069	1,068	1,067	1,061	1,059	1,063
Transportation equipment.....	1,132	1,129	1,116	1,143	1,136	1,079	1,118	1,122	1,112	1,123	1,099	1,094	1,085
Instruments and related products.....	236	238	238	237	237	240	241	240	237	236	234	233	233
Miscellaneous manufacturing industries.....	323	319	320	317	320	321	317	312	315	313	313	311	311
Nondurable goods.....	5,526	5,525	5,509	5,539	5,514	5,524	5,547	5,542	5,566	5,534	5,527	5,499	5,503
Food and kindred products.....	1,161	1,154	1,148	1,159	1,143	1,149	1,148	1,151	1,158	1,152	1,172	1,163	1,167
Tobacco manufactures.....	78	80	82	77	73	79	75	75	77	78	77	77	77
Textile mill products.....	794	795	796	795	793	793	798	797	798	800	800	799	800
Apparel and related products.....	1,148	1,148	1,144	1,164	1,159	1,154	1,169	1,160	1,171	1,153	1,141	1,130	1,125
Paper and allied products.....	490	490	488	488	488	490	490	489	488	486	488	486	487
Printing, publishing, and allied industries.....	599	597	590	591	593	594	594	594	595	591	582	579	582
Chemicals and allied products.....	525	525	524	527	526	527	527	527	525	524	521	521	519
Petroleum refining and related industries.....	114	118	119	120	120	120	120	119	120	120	119	119	118
Rubber and miscellaneous plastic products.....	312	311	311	308	309	310	315	321	324	323	318	315	318
Leather and leather products.....	305	307	307	310	310	308	311	309	310	307	310	310	310

<sup>1</sup> For definition of production workers, see footnote 1, table A-3.<sup>2</sup> Preliminary.NOTE: The seasonal adjustment method used is described in "New Seasonal Adjustment Factors for Labor Force Components," *Monthly Labor Review*, August 1960, pp. 822-827.

TABLE A-6. Unemployment insurance and employment service program operations <sup>1</sup>

[All items except average benefit amounts are in thousands]

Item	1963												1962
	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	Jan.	Dec.
<b>Employment service:<sup>2</sup></b>													
New applications for work.....	793	827	953	878	829	928	1,096	911	904	861	904	1,097	766
Nonfarm placements.....	432	493	662	664	611	572	677	612	581	496	423	459	434
<b>State unemployment insurance programs:</b>													
Initial claims <sup>3,4</sup> .....	1,865	1,200	1,157	957	1,086	1,351	973	1,079	1,216	1,127	1,308	2,102	1,747
Insured unemployment <sup>5</sup> (average weekly volume) <sup>6</sup> .....	1,972	1,542	1,333	1,261	1,419	1,493	1,468	1,624	1,918	2,298	2,546	2,591	2,063
Rate of insured unemployment <sup>7</sup> .....	4.7	3.6	3.1	3.0	3.4	3.6	3.5	3.9	4.7	5.6	6.2	6.3	5.1
Weeks of unemployment compensated.....	6,705	4,733	4,923	4,650	5,368	5,695	5,308	6,732	7,919	9,091	9,025	10,002	6,307
Average weekly benefit amount for total unemployment.....	\$35.78	\$35.37	\$35.15	\$34.93	\$34.67	\$34.43	\$34.34	\$34.91	\$35.54	\$35.80	\$35.70	\$35.52	\$35.11
Total benefits paid.....	\$232,954	\$164,977	\$171,957	\$163,126	\$186,814	\$195,632	\$188,189	\$235,851	\$274,798	\$316,422	\$313,272	\$342,411	\$214,203
<b>Unemployment compensation for ex-service- men:<sup>8,9</sup></b>													
Initial claims <sup>3</sup> .....	39	29	31	28	29	31	22	20	23	25	27	39	31
Insured unemployment <sup>5</sup> (average weekly volume).....	60	48	43	42	45	44	42	47	58	71	77	77	65
Weeks of unemployment compensated.....	231	164	174	170	184	176	181	203	267	303	306	338	235
Total benefits paid.....	\$7,622	\$5,396	\$5,857	\$5,727	\$6,202	\$5,909	\$6,269	\$6,760	\$8,797	\$9,932	\$10,027	\$11,100	\$7,679
<b>Unemployment compensation for Federal civilian employees:<sup>10,11</sup></b>													
Initial claims <sup>3</sup> .....	15	13	14	12	12	19	12	11	13	11	12	20	12
Insured unemployment <sup>5</sup> (average weekly volume).....	34	32	29	28	29	30	26	28	31	35	38	37	31
Weeks of unemployment compensated.....	143	111	120	114	123	110	113	119	137	150	148	156	116
Total benefits paid.....	\$5,369	\$4,297	\$4,723	\$4,540	\$4,844	\$4,387	\$4,941	\$4,678	\$5,241	\$5,591	\$5,433	\$5,744	\$4,262
<b>Railroad unemployment insurance:</b>													
Applications <sup>12</sup> .....	12	11	12	15	15	46	11	4	4	5	7	19	12
Insured unemployment (average weekly volume).....	47	45	41	41	37	39	32	39	49	57	64	73	61
Number of payments <sup>13</sup> .....	110	86	98	85	90	79	77	99	118	138	137	173	132
Average amount of benefit payment <sup>14</sup> .....	\$79.04	\$78.60	\$77.05	\$76.90	\$77.90	\$76.07	\$73.87	\$74.44	\$77.11	\$80.24	\$80.58	\$79.97	\$79.56
Total benefits paid <sup>14</sup> .....	\$8,590	\$6,672	\$7,475	\$6,416	\$6,906	\$5,852	\$5,563	\$7,333	\$9,005	\$11,004	\$10,881	\$13,732	\$10,358
<b>All programs:<sup>15</sup></b>													
Insured unemployment <sup>5</sup> .....	2,122	1,686	1,476	1,408	1,568	1,651	1,628	1,799	2,089	2,465	2,726	2,778	2,223

<sup>1</sup> Includes data for Puerto Rico, beginning January 1961 when the commonwealth's program became part of the Federal-State UI system.<sup>2</sup> Includes Guam and the Virgin Islands.<sup>3</sup> Initial claims are notices filed by workers to indicate they are starting periods of unemployment. Excludes transitional claims.<sup>4</sup> Includes interstate claims for the Virgin Islands.<sup>5</sup> Number of workers reporting the completion of at least 1 week of unemployment.<sup>6</sup> State insured unemployment include data under the program for Puerto Rican sugar cane workers.<sup>7</sup> The rate is the number of insured unemployed expressed as a percent of the average covered employment in a 12-month period.<sup>8</sup> Excludes data on claims and payments made jointly with other programs.<sup>9</sup> Includes the Virgin Islands.<sup>10</sup> Excludes data on claims and payments made jointly with State programs.<sup>11</sup> 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.<sup>12</sup> Payments are for unemployment in 14-day registration periods.<sup>13</sup> The average amount is an average for all compensable periods, not adjusted for recovery of overpayments or settlement of underpayments.<sup>14</sup> Adjusted for recovery of overpayments and settlement of underpayments.<sup>15</sup> 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, Bureau of Employment Security for all items except railroad unemployment insurance, which is prepared by the U.S. Railroad Retirement Board.



## B.—Labor Turnover

TABLE B-1. Labor turnover rates, by major industry group <sup>1</sup>

[Per 100 employees]

Revised series; see box, p. 348.

Major industry group	1963												1962	Annual average	
	Dec. <sup>2</sup>	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	Jan.	Dec.	1962	1961
Accessions: Total															
Manufacturing:															
Actual	2.4	2.9	3.9	4.8	4.8	4.3	4.8	4.0	3.9	3.5	3.3	3.6	2.4	4.1	4.1
Seasonally adjusted	3.8	3.6	3.9	3.9	3.7	4.0	3.9	3.8	4.1	3.8	3.9	3.7	3.8		
Durable goods	2.4	2.7	3.6	4.5	4.2	3.7	4.2	3.8	3.8	3.5	3.2	3.5	2.3	3.8	3.9
Ordnance and accessories	1.6	2.0	2.7	2.8	2.7	2.6	2.9	2.5	2.3	2.1	2.2	2.5	1.7	2.9	2.9
Lumber and wood products, except furniture	2.8	3.5	4.9	6.3	6.8	5.7	7.9	7.3	6.6	6.0	4.4	4.6	2.4	5.5	5.3
Furniture and fixtures	2.6	3.3	4.8	5.6	5.9	5.5	4.8	4.5	4.4	3.8	3.9	4.1	2.6	4.5	4.1
Stone, clay, and glass products	2.0	2.5	3.1	3.4	3.8	4.2	5.1	4.4	5.7	4.7	3.5	3.6	1.9	3.8	3.7
Primary metal industries	2.6	2.5	2.6	2.5	2.4	2.4	3.3	3.5	3.8	3.6	3.6	3.4	2.3	2.8	3.4
Fabricated metal products	2.6	3.0	4.0	4.9	4.9	4.3	4.9	4.2	4.3	3.8	3.2	3.7	2.5	4.1	4.4
Machinery	2.4	2.6	2.9	3.4	3.0	2.9	3.4	2.7	2.7	2.6	2.7	3.0	2.0	3.0	3.1
Electrical equipment and supplies	2.1	2.5	3.2	3.7	3.7	3.2	3.6	2.9	2.9	2.7	2.7	3.0	2.1	3.6	3.6
Transportation equipment	2.6	2.9	4.0	7.0	5.5	3.6	4.1	3.8	3.8	3.5	3.3	3.8	2.9	4.7	4.7
Instruments and related products	1.9	2.0	2.7	3.4	3.1	3.4	3.9	3.1	2.6	2.5	2.4	2.7	1.7	2.7	2.6
Miscellaneous manufacturing industries	2.6	3.7	5.6	6.8	6.6	7.0	5.5	5.2	5.7	5.1	5.0	6.2	2.4	5.6	5.6
Nondurable goods	2.4	3.1	4.3	5.1	5.4	5.1	5.5	4.2	3.9	3.5	3.4	3.7	2.5	4.3	4.2
Food and kindred products	2.9	3.9	6.5	8.1	9.1	7.5	8.9	5.6	4.9	4.3	3.8	4.2	3.3	6.4	6.0
Tobacco manufactures	4.6	4.4	5.9	13.1	24.5	8.3	3.1	2.4	1.8	2.6	2.6	3.6	6.0	6.4	5.9
Textile mill products	2.1	3.0	4.0	4.2	4.3	4.0	4.0	3.9	3.6	3.5	3.3	3.3	1.9	3.6	3.5
Apparel and related products	3.1	4.5	5.0	5.5	5.8	7.1	5.7	5.9	5.1	4.7	5.4	5.9	3.1	5.5	5.7
Paper and allied products	1.7	2.0	2.6	3.0	2.9	2.9	4.0	2.7	2.7	2.4	2.2	2.3	1.6	2.6	2.6
Printing, publishing, and allied industries	2.0	2.5	3.0	3.5	3.2	3.2	4.0	2.8	2.8	2.6	2.6	2.9	2.0	3.0	2.9
Chemicals and allied products	1.3	1.3	1.8	2.2	1.9	2.2	3.3	2.0	2.6	2.4	1.9	2.0	1.3	2.1	2.1
Petroleum refining and related industries	.6	.9	1.2	1.4	1.3	1.9	3.0	2.0	2.1	1.6	.9	1.3	.6	1.4	1.3
Rubber and miscellaneous plastic products	2.0	2.6	3.8	4.3	4.3	4.5	4.0	3.7	3.8	3.4	3.0	3.2	2.3	3.8	3.9
Leather and leather products	3.3	4.1	4.8	4.8	5.4	6.6	6.3	5.6	4.4	4.1	4.2	5.9	3.5	5.0	5.0
Nonmanufacturing:															
Metal mining	1.2	2.5	2.7	2.6	2.8	2.7	3.8	3.6	5.7	2.9	2.8	3.2	2.0	2.9	2.7
Coal mining	1.5	1.7	1.8	2.3	2.9	2.1	1.5	2.1	2.2	2.5	2.2	2.2	1.4	1.7	2.2
Accessions: New hires															
Manufacturing:															
Actual	1.3	1.8	2.6	3.1	3.2	2.7	3.3	2.5	2.3	2.0	1.8	1.9	1.2	2.5	2.2
Seasonally adjusted	2.4	2.3	2.4	2.3	2.4	2.4	2.4	2.4	2.6	2.4	2.2	2.3	2.2		
Durable goods	1.3	1.7	2.4	2.8	2.6	2.3	2.9	2.3	2.2	1.8	1.7	1.7	1.1	2.3	1.9
Ordnance and accessories	1.0	1.3	1.8	2.0	1.9	1.7	1.9	1.4	1.3	1.1	1.3	1.4	1.1	2.0	2.1
Lumber and wood products, except furniture	2.1	2.9	4.2	5.5	5.9	4.7	6.3	5.5	4.6	3.7	2.9	2.6	1.7	3.9	3.3
Furniture and fixtures	1.9	2.7	4.0	4.8	4.9	4.4	4.0	3.5	3.3	2.7	2.7	2.7	1.5	3.5	2.8
Stone, clay, and glass products	1.0	1.5	2.0	2.4	2.8	3.0	3.7	2.8	2.8	2.1	1.6	1.3	.9	2.2	1.8
Primary metal industries	.8	.8	1.1	1.3	1.2	1.2	2.1	1.7	1.4	1.0	.9	.9	.6	1.1	.9
Fabricated metal products	1.5	2.0	2.9	3.5	3.2	2.8	3.2	2.6	2.4	2.0	1.8	1.9	1.3	2.4	2.1
Machinery	1.6	1.7	2.0	2.2	1.9	1.9	2.5	1.9	1.9	1.8	1.8	1.9	1.1	2.0	1.6
Electrical equipment and supplies	1.2	1.6	2.2	2.6	2.3	1.9	2.4	1.7	1.6	1.5	1.5	1.6	1.2	2.3	2.1
Transportation equipment	1.3	1.6	2.3	2.5	1.9	1.8	2.4	1.8	1.9	1.7	1.6	1.6	1.2	2.1	1.6
Instruments and related products	1.2	1.4	2.0	2.4	2.1	2.2	3.1	2.0	1.8	1.7	1.6	1.9	1.1	2.0	1.7
Miscellaneous manufacturing industries	1.5	2.7	4.4	5.2	4.8	4.1	3.7	3.2	3.2	2.6	2.7	2.6	1.5	3.8	3.6
Nondurable goods	1.4	1.9	2.9	3.5	3.8	3.2	3.8	2.7	2.4	2.2	2.0	2.1	1.3	2.8	2.5
Food and kindred products	1.5	2.3	4.0	5.3	6.5	4.6	5.9	3.5	2.8	2.2	1.9	2.1	1.7	3.8	3.4
Tobacco manufactures	1.6	2.3	3.8	8.5	14.4	3.3	1.8	1.3	1.1	1.6	1.1	1.9	3.4	3.2	3.1
Textile mill products	1.4	2.1	2.9	3.1	3.2	2.8	3.0	2.8	2.5	2.2	2.0	1.9	1.2	2.5	2.2
Apparel and related products	1.6	2.4	3.4	3.8	3.9	4.0	3.6	3.6	3.4	3.2	3.1	3.2	1.5	3.5	3.1
Paper and allied products	1.0	1.3	2.1	2.4	2.2	2.1	3.1	1.9	1.7	1.5	1.3	1.3	.9	1.8	1.7
Printing, publishing, and allied industries	1.3	1.9	2.4	2.9	2.5	2.5	3.0	2.1	2.0	1.9	1.8	2.1	1.3	2.3	2.1
Chemicals and allied products	.8	.9	1.3	1.6	1.4	1.6	2.6	1.4	1.8	1.6	1.2	1.2	.7	1.5	1.4
Petroleum refining and related industries	.4	.7	.8	1.1	1.0	1.6	2.4	1.5	1.3	.9	.5	.7	.4	1.0	.9
Rubber and miscellaneous plastic products	1.2	1.7	2.8	3.2	2.9	2.6	2.7	2.4	2.1	1.9	1.8	1.7	1.2	2.4	2.6
Leather and leather products	2.3	2.6	3.4	3.6	3.9	4.2	3.9	3.2	2.6	2.3	2.4	3.3	2.1	3.1	2.8
Nonmanufacturing:															
Metal mining	.8	1.3	1.7	1.9	1.8	1.5	2.7	1.6	1.7	1.5	1.4	1.7	1.2	1.5	1.2
Coal mining	.7	.8	1.0	1.2	1.1	.9	.7	.8	.8	.8	.9	.6	.4	.5	.6

See footnotes at end of table.

TABLE B-1. Labor turnover rates, by major industry group <sup>1</sup>—Continued

[Per 100 employees]

Revised series; see box, p. 348

Major industry group	1963												1962	Annual average	
	Dec. <sup>2</sup>	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	Jan.	Dec.	1962	1961
	Separations: Total														
Manufacturing:															
Actual.....	3.5	3.8	4.1	4.9	4.7	4.1	3.4	3.6	3.6	3.5	3.2	4.0	3.8	4.1	4.0
Seasonally adjusted.....	3.5	3.7	3.7	3.9	4.2	4.0	3.8	4.0	4.0	3.8	3.7	4.0	3.8	---	---
Durable goods.....	3.3	3.5	3.7	4.3	4.7	4.0	3.2	3.3	3.3	3.3	3.1	3.7	3.4	3.8	3.9
Ordnance and accessories.....	2.1	2.4	2.5	3.2	2.8	2.2	2.4	2.3	2.4	4.2	3.1	3.2	2.0	2.7	2.3
Lumber and wood products, except furniture.....	4.1	5.8	5.5	7.1	7.3	5.2	5.1	5.0	5.2	5.4	4.7	5.0	5.5	5.6	5.4
Furniture and fixtures.....	3.4	4.0	4.9	5.0	5.3	4.3	4.2	4.4	4.5	4.5	3.9	4.5	3.7	4.6	4.3
Stone, clay, and glass products.....	4.8	4.0	3.9	4.6	4.3	3.3	3.2	3.1	3.0	2.9	3.4	4.9	5.2	4.1	3.8
Primary metal industries.....	2.2	2.7	3.5	4.1	4.1	3.6	2.0	2.1	2.1	2.1	2.2	2.6	2.5	3.3	2.8
Fabricated metal products.....	3.5	4.0	4.3	4.8	4.5	4.6	3.5	3.7	3.5	3.8	3.6	4.2	3.5	4.2	4.6
Machinery.....	1.9	2.3	2.7	3.3	3.4	2.8	2.8	3.0	2.6	2.5	2.3	2.8	2.1	2.8	3.2
Electrical equipment and supplies.....	2.9	3.5	3.4	4.0	3.6	3.2	3.1	3.0	3.1	3.6	3.1	3.7	2.8	3.3	3.3
Transportation equipment.....	3.1	3.1	3.5	3.9	7.5	5.9	3.5	3.7	3.9	3.5	3.3	3.7	3.2	4.6	5.0
Instruments and related products.....	2.8	2.4	2.7	3.7	3.0	3.0	2.3	2.7	2.3	2.4	2.4	2.9	2.1	2.6	2.5
Miscellaneous manufacturing industries.....	10.9	7.2	5.3	5.4	5.5	5.2	4.2	4.5	4.8	4.2	3.8	5.5	11.5	6.0	5.8
Nondurable goods.....	3.8	4.3	4.7	5.6	4.8	4.3	3.8	4.0	3.9	3.7	3.4	4.3	4.3	4.4	4.2
Food and kindred products.....	5.2	6.6	7.5	9.2	6.5	5.8	4.8	4.6	4.8	4.9	4.7	6.4	6.3	6.2	6.0
Tobacco manufactures.....	10.9	11.9	8.6	4.2	4.3	2.6	2.2	4.0	3.9	7.0	9.2	6.8	11.0	6.7	5.7
Textile mill products.....	3.1	3.6	4.0	4.5	4.6	3.8	3.3	3.9	3.7	3.5	3.1	3.9	3.4	3.7	3.4
Apparel and related products.....	5.4	5.3	5.5	5.8	5.8	6.4	5.6	5.8	6.0	4.8	4.2	5.5	5.9	5.8	5.8
Paper and allied products.....	2.4	2.7	2.8	4.2	3.4	2.5	2.2	2.5	2.5	2.5	2.3	2.9	2.5	2.8	2.7
Printing, publishing, and allied industries.....	2.1	2.7	3.1	3.8	3.5	2.6	3.0	2.6	2.7	2.3	3.0	2.7	2.9	2.9	2.9
Chemicals and allied products.....	1.7	1.8	2.0	3.1	2.5	1.8	2.1	2.6	1.9	1.7	1.4	1.7	1.6	2.1	2.0
Petroleum refining and related industries.....	2.2	1.8	1.8	3.1	2.1	1.7	1.8	1.7	1.6	1.8	1.9	1.8	2.1	1.8	1.7
Rubber and miscellaneous plastic products.....	3.5	3.7	3.7	4.4	4.1	4.3	3.3	3.5	3.2	3.7	3.0	3.6	2.9	3.6	3.6
Leather and leather products.....	5.4	4.1	4.8	5.8	5.9	5.6	4.1	4.9	5.9	4.7	3.8	5.2	5.4	5.2	5.0
Nonmanufacturing:															
Metal mining.....	3.7	3.3	3.1	3.9	2.9	2.6	2.5	3.1	3.0	3.1	2.6	3.6	5.5	3.5	3.1
Coal mining.....	2.1	1.5	1.4	1.9	1.8	2.6	1.8	2.2	2.8	2.5	2.0	2.1	1.8	2.8	2.7
	Separations: Quits														
Manufacturing:															
Actual.....	.8	1.1	1.5	2.4	2.1	1.4	1.4	1.4	1.3	1.2	1.0	1.1	0.3	1.4	1.2
Seasonally adjusted.....	1.3	1.4	1.4	1.3	1.5	1.4	1.4	1.4	1.4	1.5	1.3	1.4	1.3	---	---
Durable goods.....	.7	1.0	1.3	2.0	1.8	1.2	1.2	1.3	1.1	1.0	.9	.9	.7	1.2	1.0
Ordnance and accessories.....	.5	.7	1.0	1.7	1.3	1.0	1.0	1.0	.8	.9	.9	1.0	.7	1.2	1.1
Lumber and wood products, except furniture.....	1.3	2.1	2.9	4.5	4.9	2.9	3.0	3.0	2.6	2.2	1.6	1.7	1.3	2.4	1.9
Furniture and fixtures.....	1.3	1.7	2.3	3.0	3.1	2.1	1.9	2.3	2.2	1.9	1.5	1.7	1.1	2.1	1.5
Stone, clay, and glass products.....	.6	1.0	1.2	2.2	1.9	1.3	1.3	1.3	1.1	.9	.7	.8	.6	1.2	1.0
Primary metal industries.....	.3	.5	.6	1.2	1.1	.7	.6	.7	.6	.5	.4	.4	.3	.6	.5
Fabricated metal products.....	.8	1.0	1.4	2.2	1.9	1.2	1.2	1.3	1.2	1.1	.8	.9	.7	1.3	1.0
Machinery.....	.6	.8	1.0	1.6	1.4	.9	.9	1.0	1.0	.9	.7	.8	.6	1.0	.8
Electrical equipment and supplies.....	.8	1.1	1.3	2.0	1.7	1.2	1.2	1.2	1.1	1.1	1.0	1.0	.8	1.4	1.2
Transportation equipment.....	.5	.7	.9	1.5	1.2	.9	.9	.9	.8	.8	.7	.7	.5	1.0	.8
Instruments and related products.....	.9	.9	1.1	2.0	1.6	1.2	1.1	1.3	1.0	1.0	1.0	1.1	.8	1.2	1.0
Miscellaneous manufacturing industries.....	1.1	1.6	2.3	3.0	2.9	1.8	1.8	1.8	1.6	1.5	1.3	1.3	1.0	2.0	1.8
Nondurable goods.....	1.0	1.3	1.8	2.8	2.4	1.7	1.6	1.7	1.5	1.4	1.2	1.3	1.0	1.7	1.5
Food and kindred products.....	1.0	1.5	2.2	3.8	2.8	1.9	1.7	1.6	1.4	1.4	1.2	1.3	1.1	1.9	1.6
Tobacco manufactures.....	.6	.8	1.0	1.3	1.5	.8	.7	.8	.8	.7	.7	.9	.6	.9	.9
Textile mill products.....	1.1	1.6	2.2	2.8	2.8	2.1	1.9	2.1	2.0	1.7	1.4	1.6	1.1	1.9	1.6
Apparel and related products.....	1.4	1.8	2.3	2.8	3.1	2.5	2.2	2.4	2.3	2.0	1.8	2.0	1.4	2.3	2.0
Paper and allied products.....	.6	.9	1.2	2.6	1.9	1.0	1.0	1.0	1.0	.9	.7	.8	.6	1.1	1.0
Printing, publishing, and allied industries.....	.9	1.1	1.4	2.2	2.0	1.3	1.5	1.5	1.3	1.2	1.1	1.2	.9	1.5	1.4
Chemicals and allied products.....	.4	.5	.7	1.9	1.3	.7	.7	.8	.7	.6	.5	.6	.5	.8	.7
Petroleum refining and related industries.....	.2	.4	.6	1.7	1.1	.7	.8	.7	.6	.5	.5	.4	.4	.7	.5
Rubber and miscellaneous plastic products.....	.8	1.1	1.6	2.3	2.0	1.4	1.4	1.4	1.3	1.1	1.0	1.1	.8	1.4	1.2
Leather and leather products.....	1.5	1.9	2.5	3.1	3.3	2.5	2.2	2.4	2.3	2.0	1.6	2.0	1.5	2.3	2.0
Nonmanufacturing:															
Metal mining.....	.5	.8	1.2	2.3	1.9	1.3	1.4	1.5	1.4	1.2	1.2	1.2	.8	1.2	1.0
Coal mining.....	.4	.4	.5	.6	.6	.5	.3	.4	.5	.4	.3	.3	.3	.4	.4

See footnotes at end of table.

TABLE B-1. Labor turnover rates, by major industry group <sup>1</sup>—Continued

[Per 100 employees]

Revised series; see box, p. 348.

Major industry group	1963												1962	Annual average	
	Dec. <sup>2</sup>	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	Jan.	Dec.	1962	1961
Separations: Layoffs															
Manufacturing:															
Actual.....	2.1	2.1	1.9	1.8	1.9	2.0	1.4	1.5	1.6	1.7	1.6	2.2	2.5	2.0	2.2
Seasonally adjusted.....	1.6	1.8	1.7	1.8	2.0	1.9	1.7	1.8	1.8	1.8	1.8	2.0	2.0	1.9	2.2
Durable goods.....	2.0	1.8	1.6	1.4	2.1	2.1	1.3	1.3	1.4	1.6	1.6	2.0	2.2	1.9	2.2
Ordinance and accessories.....	1.0	1.1	.9	1.0	.9	.7	.9	.8	1.1	2.7	1.8	1.7	1.0	.9	.7
Lumber and wood products, except furniture.....	2.2	2.9	1.7	1.5	1.4	1.5	1.2	1.1	1.8	2.5	2.3	2.6	3.6	2.4	2.8
Furniture and fixtures.....	1.6	1.6	1.7	1.1	1.3	1.4	1.6	1.3	1.5	1.8	1.7	2.1	2.0	1.8	2.1
Stone, clay, and glass products.....	3.7	2.4	2.0	1.7	1.6	1.2	1.2	1.2	1.2	1.4	2.1	3.4	4.0	2.2	2.2
Primary metal industries.....	1.3	1.6	2.1	2.2	2.3	2.2	.7	.8	1.0	1.1	1.4	1.7	2.1	2.1	1.7
Fabricated metal products.....	2.1	2.3	2.1	1.8	1.7	2.6	1.5	1.7	1.7	2.0	2.1	2.5	2.3	2.2	2.9
Machinery.....	.8	.9	1.1	1.0	1.3	1.3	1.2	1.4	1.0	1.0	.9	1.3	1.0	1.2	1.7
Electrical equipment and supplies.....	1.4	1.6	1.2	1.1	1.1	1.3	1.1	1.2	1.3	1.7	1.4	1.8	1.4	1.1	1.4
Transportation equipment.....	1.7	1.7	1.6	1.5	5.4	4.0	1.7	1.9	2.2	1.9	1.9	2.1	1.9	2.8	3.6
Instruments and related products.....	1.5	.9	.9	.8	.8	1.3	.6	.7	.7	.7	.9	1.0	.8	.7	.9
Miscellaneous manufacturing industries.....	9.3	4.7	2.1	1.6	1.7	2.6	1.7	2.0	2.4	2.0	1.8	3.6	9.9	3.1	3.2
Nondurable goods.....	2.4	2.4	2.3	2.2	1.7	1.9	1.5	1.7	1.8	1.7	1.6	2.4	2.8	2.1	2.2
Food and kindred products.....	3.6	4.5	4.6	4.6	2.9	3.2	2.5	2.4	2.8	2.9	2.9	4.4	4.7	3.7	3.9
Tobacco manufactures.....	9.9	10.7	7.0	2.5	2.2	1.3	1.2	2.7	2.6	5.8	8.1	5.4	9.9	5.3	4.4
Textile mill products.....	1.5	1.5	1.2	1.0	1.1	1.1	.8	1.1	1.1	1.2	1.1	1.7	1.9	1.2	1.3
Apparel and related products.....	3.5	2.8	2.5	2.3	1.9	3.0	2.6	2.6	3.0	2.1	1.8	2.7	4.1	2.7	3.1
Paper and allied products.....	1.4	1.2	.9	.9	.9	.8	.6	.9	.9	1.1	1.2	1.5	1.4	1.0	1.1
Printing, publishing, and allied industries.....	.8	1.1	1.2	1.0	1.0	.8	.9	1.1	.9	1.0	.8	1.3	1.3	1.0	1.0
Chemicals and allied products.....	.9	.9	.7	.7	.7	.7	.9	1.4	.8	.6	.5	.7	.8	.8	.9
Petroleum refining and related industries.....	1.4	1.0	.8	.8	.6	.4	.3	.5	.5	.7	.9	.8	.9	.6	.6
Rubber and miscellaneous plastic products.....	2.1	2.0	1.2	1.3	1.4	2.1	1.2	1.3	1.2	1.8	1.3	1.8	1.6	1.5	1.8
Leather and leather products.....	3.3	1.5	1.7	1.9	1.6	2.3	1.1	1.7	2.9	2.0	1.6	2.5	3.4	2.1	2.2
Nonmanufacturing:															
Metal mining.....	2.6	1.9	1.2	.8	.5	.6	.4	.8	.9	1.4	.9	1.3	4.1	1.5	1.4
Coal mining.....	1.5	.7	.5	.8	.7	1.6	1.0	1.4	1.8	1.6	1.3	1.4	1.1	1.9	1.9

<sup>1</sup> For comparability of data with those published in issues prior to October 1963, see footnote 1, table A-2.

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.

<sup>2</sup> Preliminary.



## C.—Earnings and Hours

TABLE C-1. Gross hours and earnings of production workers,<sup>1</sup> by industry

Revised series; see box, p. 348.

Industry	1964	1963												Annual average	
	Jan. <sup>2</sup>	Dec. <sup>2</sup>	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	Jan.	1962	1961
Average weekly earnings															
Mining.....	-----	\$116.06	\$113.99	\$116.75	\$117.04	\$115.08	\$112.06	\$117.85	\$114.39	\$112.75	\$110.97	\$112.48	\$111.66	\$110.70	\$106.92
Metal mining.....	-----	121.80	119.89	120.60	121.06	118.08	116.09	118.85	117.71	117.50	118.37	117.14	116.16	117.45	113.44
Iron ores.....	-----	127.51	120.43	120.43	127.20	119.65	119.50	124.14	120.08	117.80	116.73	116.05	118.95	122.19	115.50
Copper ores.....	-----	125.54	128.17	130.23	124.66	125.27	121.98	122.69	122.55	124.12	125.71	121.69	121.12	120.70	119.03
Coal mining.....	-----	126.88	117.94	121.68	123.48	118.18	108.19	128.74	122.14	117.73	113.77	121.29	120.43	113.09	110.62
Bituminous.....	-----	129.44	119.45	123.48	124.97	119.32	110.21	130.60	124.66	119.81	114.56	122.77	120.90	114.50	112.01
Crude petroleum and natural gas.....	-----	113.25	113.10	113.05	113.67	113.32	112.36	113.36	110.62	111.45	110.77	110.51	110.09	109.20	105.75
Crude petroleum and natural gas fields.....	-----	121.54	120.54	119.43	122.07	119.31	120.30	123.31	117.74	120.30	118.26	118.15	121.09	115.46	113.96
Oil and gas field services.....	-----	106.14	106.46	108.43	106.64	107.56	105.46	105.04	104.49	103.52	104.25	103.76	100.43	103.63	98.44
Quarrying and nonmetallic mining.....	-----	103.91	108.24	115.04	114.50	114.33	113.83	112.91	110.32	106.66	102.00	98.77	100.14	105.43	100.09
Contract construction.....	-----	125.32	125.58	134.98	132.90	132.70	130.90	129.79	128.06	124.68	122.72	118.33	121.07	122.47	118.05
General building contractors.....	-----	116.61	116.53	124.58	121.88	122.02	120.62	118.58	117.85	115.84	113.34	108.85	111.11	112.50	108.83
Heavy construction.....	-----	116.89	124.00	138.65	136.85	137.03	135.22	132.13	126.96	122.86	117.30	110.70	115.82	122.31	120.09
Highway and street construction.....	-----	109.39	119.99	137.81	135.99	134.67	133.62	130.09	123.68	117.74	109.42	99.72	107.54	118.37	113.81
Other heavy construction.....	-----	123.91	128.38	140.34	137.78	140.68	136.92	134.60	131.02	127.98	123.80	119.19	123.13	126.48	127.12
Special trade contractors.....	-----	134.23	131.38	139.49	137.64	137.25	136.14	135.75	134.67	131.40	130.31	125.93	128.47	128.50	123.44
Manufacturing.....	\$101.05	102.66	100.85	100.53	100.53	98.42	99.23	100.37	99.23	97.36	98.09	97.20	97.44	96.56	92.34
Durable goods.....	110.02	111.90	110.00	109.71	109.45	107.01	103.09	109.82	108.36	106.37	106.49	106.23	105.82	104.70	100.35
Nondurable goods.....	88.69	90.17	89.10	88.98	89.38	88.40	83.36	88.36	87.52	85.97	86.68	85.85	86.24	85.54	82.92
Average weekly hours															
Mining.....	-----	41.6	41.3	42.3	42.1	42.0	41.2	42.7	41.9	41.3	40.5	40.9	40.9	41.0	40.5
Metal mining.....	-----	42.0	41.2	41.3	41.6	41.0	40.8	41.7	41.3	40.8	41.1	41.1	40.9	41.5	41.4
Iron ores.....	-----	41.0	39.1	39.1	41.3	39.1	38.8	40.7	39.5	38.0	37.9	37.8	39.0	39.8	38.5
Copper ores.....	-----	42.7	43.3	43.7	42.4	42.9	42.8	42.9	43.0	43.4	43.8	43.0	42.8	42.8	43.6
Coal mining.....	-----	39.9	37.8	39.0	39.2	38.0	-----	41.0	39.4	38.1	36.7	39.0	39.1	36.6	35.8
Bituminous.....	-----	40.2	37.8	39.2	39.3	38.0	-----	41.2	39.7	38.4	36.6	39.1	39.0	36.7	35.9
Crude petroleum and natural gas.....	-----	42.1	42.2	42.5	42.1	42.6	42.4	42.3	41.9	41.9	41.8	41.7	41.7	42.0	41.8
Crude petroleum and natural gas fields.....	-----	41.2	41.0	40.9	41.1	41.0	41.2	41.8	40.6	41.2	40.5	40.6	41.9	40.8	40.7
Oil and gas field services.....	-----	42.8	43.1	43.9	43.0	43.9	43.4	42.7	43.0	42.6	42.9	42.7	41.5	43.0	42.8
Quarrying and nonmetallic mining.....	-----	41.9	44.0	46.2	45.8	46.1	45.9	45.9	45.4	44.4	42.5	41.5	41.9	44.3	43.9
Contract construction.....	-----	35.4	36.4	38.9	38.3	38.8	38.5	38.4	38.0	37.3	36.2	34.7	35.4	37.0	36.9
General building contractors.....	-----	34.5	35.1	37.3	36.6	37.2	37.0	36.6	36.6	36.2	35.2	33.7	34.4	35.6	35.8
Heavy construction.....	-----	36.3	40.0	43.6	42.9	43.5	43.2	42.9	41.9	41.2	39.1	36.9	38.1	40.5	40.3
Highway and street construction.....	-----	35.4	40.4	44.6	44.0	44.3	44.1	43.8	42.5	41.9	38.8	36.0	37.6	41.1	40.5
Other heavy construction.....	-----	37.1	39.5	42.4	41.5	42.5	42.0	41.8	41.2	40.9	39.3	37.6	38.6	39.9	40.1
Special trade contractors.....	-----	35.7	35.7	37.7	37.2	37.5	37.4	37.5	37.1	36.5	35.8	34.5	35.1	36.3	36.2
Manufacturing.....	40.1	40.9	40.5	40.7	40.7	40.5	40.5	40.8	40.5	39.9	40.2	40.0	40.1	40.4	39.8
Durable goods.....	40.9	41.6	41.2	41.4	41.3	41.0	41.1	41.6	41.2	40.6	40.8	40.7	40.7	40.9	40.3
Nondurable goods.....	38.9	39.9	39.6	39.9	39.9	40.0	39.8	39.8	39.6	38.9	39.4	39.2	39.2	39.6	39.3
Average hourly earnings															
Mining.....	-----	\$2.79	\$2.76	\$2.76	\$2.78	\$2.74	\$2.72	\$2.76	\$2.73	\$2.73	\$2.74	\$2.75	\$2.73	\$2.70	\$2.64
Metal mining.....	-----	2.90	2.91	2.92	2.91	2.88	2.86	2.85	2.85	2.88	2.88	2.85	2.84	2.83	2.74
Iron ores.....	-----	3.11	3.08	3.08	3.08	3.06	3.08	3.05	3.04	3.10	3.08	3.07	3.05	3.07	3.00
Copper ores.....	-----	2.94	2.96	2.98	2.94	2.92	2.85	2.86	2.85	2.86	2.87	2.83	2.83	2.82	2.73
Coal mining.....	-----	3.18	3.12	3.12	3.15	3.11	-----	3.14	3.10	3.09	3.10	3.11	3.08	3.09	3.09
Bituminous.....	-----	3.22	3.16	3.15	3.18	3.14	-----	3.17	3.14	3.12	3.13	3.14	3.10	3.12	3.12
Crude petroleum and natural gas.....	-----	2.69	2.68	2.66	2.70	2.66	2.65	2.68	2.64	2.66	2.65	2.65	2.64	2.60	2.53
Crude petroleum and natural gas fields.....	-----	2.95	2.94	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Oil and gas field services.....	-----	2.48	2.47	2.47	2.48	2.45	2.43	2.46	2.43	2.43	2.43	2.43	2.42	2.41	2.30
Quarrying and nonmetallic mining.....	-----	2.48	2.46	2.49	2.50	2.48	2.48	2.46	2.43	2.40	2.40	2.38	2.39	2.38	2.28
Contract construction.....	-----	3.54	3.45	3.47	3.47	3.42	3.40	3.38	3.37	3.34	3.39	3.41	3.42	3.31	3.20
General building contractors.....	-----	3.38	3.32	3.34	3.33	3.28	3.26	3.24	3.22	3.20	3.22	3.23	3.23	3.16	3.04
Heavy construction.....	-----	3.22	3.10	3.18	3.19	3.15	3.13	3.08	3.03	2.97	3.00	3.00	3.04	3.02	2.91
Highway and street construction.....	-----	3.09	2.97	3.09	3.09	3.04	3.03	2.97	2.91	2.81	2.82	2.77	2.86	2.88	2.81
Other heavy construction.....	-----	3.34	3.25	3.31	3.32	3.31	3.26	3.22	3.18	3.16	3.15	3.17	3.19	3.17	3.17
Special trade contractors.....	-----	3.76	3.68	3.70	3.70	3.66	3.64	3.62	3.63	3.60	3.64	3.65	3.66	3.64	3.48
Manufacturing.....	\$2.52	2.51	2.49	2.47	2.47	2.43	2.45	2.46	2.45	2.44	2.44	2.43	2.43	2.39	2.32
Durable goods.....	2.60	2.69	2.67	2.65	2.65	2.61	2.63	2.64	2.63	2.62	2.61	2.61	2.60	2.56	2.49
Nondurable goods.....	2.28	2.26	2.25	2.23	2.24	2.21	2.22	2.22	2.21	2.21	2.20	2.19	2.20	2.16	2.11

See footnotes at end of table.

TABLE C-1. Gross hours and earnings of production workers,<sup>1</sup> by industry—Continued

Revised series; see box, p. 348.

Industry	1964	1963												Annual average	
	Jan. <sup>2</sup>	Dec. <sup>2</sup>	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	Jan.	1962	1961
Average weekly earnings															
Manufacturing—Continued															
Durable goods															
Ordnance and accessories.....	\$121.47	\$122.66	\$120.36	\$121.13	\$121.01	\$119.31	\$117.74	\$118.24	\$117.67	\$115.14	\$118.20	\$119.65	\$119.65	\$116.31	\$113.39
Ammunition, except for small arms.....	123.82	125.03	122.51	122.89	121.77	121.95	118.96	119.65	117.50	116.24	117.86	119.31	119.02	116.69	115.49
Sighting and fire control equipment.....	115.87	129.78	128.75	129.48	129.36	123.83	121.09	120.10	122.01	119.20	127.98	128.29	128.35	126.18	117.27
Other ordnance and accessories.....	117.01	114.77	116.05	116.90	114.24	114.93	115.36	116.90	112.19	116.05	117.59	117.74	117.74	112.34	108.30
Lumber and wood products, except furniture.....	80.94	83.60	82.97	85.68	86.50	84.45	82.42	82.62	80.60	78.41	77.81	77.22	77.03	79.20	76.83
Sawmills and planing mills.....	73.15	76.22	76.02	78.34	79.15	77.36	74.96	76.07	73.97	71.82	71.16	70.62	70.98	71.71	68.09
Millwork, plywood, and related products.....	90.17	91.94	90.83	90.64	91.27	90.06	89.66	90.29	90.07	87.94	87.94	86.88	87.10	87.12	84.44
Wooden containers.....	66.30	68.51	67.49	70.18	70.00	69.64	70.14	69.14	68.31	66.73	65.01	64.91	64.02	66.17	63.12
Miscellaneous wood products.....	73.26	75.55	75.74	76.07	76.45	74.89	74.48	74.85	73.89	72.36	73.12	72.90	73.08	72.54	69.77
Furniture and fixtures.....	80.60	85.26	83.43	84.03	84.03	83.20	81.19	81.39	79.60	78.01	79.19	79.19	79.00	79.37	76.40
Household furniture.....	76.42	82.06	79.68	80.26	80.06	78.62	76.62	76.70	74.99	74.21	75.36	74.96	74.19	75.07	71.46
Office furniture.....	98.28	94.37	97.34	98.47	96.23	94.71	96.93	94.71	92.63	93.15	92.29	94.07	92.57	90.64	90.64
Partitions, office and store fixtures.....	101.75	101.89	104.38	105.67	109.10	107.64	105.37	101.75	98.39	101.20	100.58	101.85	103.57	100.63	100.63
Other furniture and fixtures.....	86.71	89.03	86.30	85.68	86.11	85.90	82.21	82.82	82.42	81.19	79.98	81.18	80.78	81.41	79.99
Average weekly hours															
Ordnance and accessories.....	40.9	41.3	40.8	41.2	41.3	41.0	40.6	41.2	41.0	40.4	40.9	41.4	41.4	41.1	40.9
Ammunition, except for small arms.....	41.0	41.4	40.7	41.1	41.0	41.2	40.6	41.4	40.8	40.5	40.5	41.0	40.9	40.8	41.1
Sighting and fire control equipment.....	40.8	41.2	41.4	41.5	42.0	40.6	39.7	39.9	40.4	39.6	42.1	42.2	42.5	42.2	40.3
Other ordnance and accessories.....	41.2	40.7	41.3	41.6	40.8	40.9	41.2	41.6	40.5	41.3	41.7	41.9	41.9	41.3	40.9
Lumber and wood products, except furniture.....	39.1	40.0	39.7	40.8	40.8	40.6	40.6	40.9	39.9	39.6	39.3	39.4	39.3	39.8	39.4
Sawmills and planing mills.....	38.5	39.7	39.8	40.8	40.8	40.5	40.3	40.9	40.2	39.9	39.1	38.8	39.0	39.4	39.2
Millwork, plywood, and related products.....	40.8	41.6	41.1	41.2	41.3	41.5	41.7	41.8	41.7	40.9	40.9	40.6	40.7	40.9	40.4
Wooden containers.....	39.0	40.3	39.7	40.8	40.7	41.7	42.0	41.4	41.4	40.2	39.4	39.1	38.8	40.1	39.7
Miscellaneous wood products.....	39.6	40.4	40.5	40.9	41.1	40.7	40.7	40.9	40.6	40.2	40.4	40.5	40.6	40.3	40.1
Furniture and fixtures.....	39.9	42.0	41.3	41.6	41.6	41.6	40.8	40.9	40.2	39.8	40.2	40.2	40.1	40.7	40.0
Household furniture.....	39.8	42.3	41.5	41.8	41.7	41.6	40.7	40.8	40.1	39.9	40.3	40.3	40.1	40.5	39.7
Office furniture.....	42.0	40.5	41.6	41.9	41.3	41.0	41.6	41.0	40.1	40.1	40.3	40.3	40.9	40.6	40.6
Partitions, office and store fixtures.....	39.9	39.8	40.3	40.8	41.8	41.4	41.0	39.9	39.2	40.0	39.6	40.1	41.1	40.7	40.7
Other furniture and fixtures.....	40.9	41.8	40.9	40.8	41.4	41.9	40.3	40.8	40.4	39.8	39.4	39.6	39.6	40.3	40.4
Average hourly earnings															
Ordnance and accessories.....	\$2.97	\$2.97	\$2.95	\$2.94	\$2.93	\$2.91	\$2.90	\$2.87	\$2.87	\$2.85	\$2.89	\$2.89	\$2.89	\$2.83	\$2.77
Ammunition, except for small arms.....	3.02	3.02	3.01	2.99	2.97	2.96	2.93	2.89	2.88	2.87	2.91	2.91	2.91	2.86	2.81
Sighting and fire control equipment.....	3.15	3.11	3.12	3.08	3.05	3.05	3.01	3.02	3.01	3.04	3.04	3.02	3.02	2.99	2.91
Other ordnance and accessories.....	2.84	2.82	2.81	2.81	2.81	2.80	2.81	2.80	2.81	2.77	2.81	2.82	2.81	2.72	2.65
Lumber and wood products, except furniture.....	2.07	2.09	2.09	2.10	2.12	2.08	2.03	2.02	2.02	1.98	1.98	1.96	1.96	1.99	1.95
Sawmills and planing mills.....	1.90	1.92	1.91	1.92	1.94	1.91	1.86	1.86	1.84	1.80	1.82	1.82	1.82	1.82	1.76
Millwork, plywood, and related products.....	2.21	2.21	2.21	2.20	2.21	2.17	2.15	2.15	2.16	2.15	2.15	2.14	2.14	2.13	2.09
Wooden containers.....	1.70	1.70	1.70	1.72	1.72	1.67	1.67	1.67	1.65	1.66	1.65	1.66	1.65	1.65	1.59
Miscellaneous wood products.....	1.85	1.87	1.87	1.86	1.86	1.84	1.83	1.83	1.82	1.80	1.81	1.80	1.80	1.80	1.74
Furniture and fixtures.....	2.02	2.03	2.02	2.02	2.02	2.00	1.99	1.99	1.98	1.96	1.97	1.97	1.97	1.95	1.91
Household furniture.....	1.92	1.94	1.92	1.92	1.92	1.89	1.88	1.88	1.87	1.86	1.87	1.86	1.85	1.84	1.80
Office furniture.....	2.34	2.33	2.34	2.35	2.33	2.31	2.33	2.31	2.31	2.30	2.29	2.30	2.28	2.28	2.23
Partitions, office and store fixtures.....	2.55	2.56	2.59	2.59	2.61	2.60	2.57	2.55	2.51	2.53	2.54	2.54	2.52	2.47	2.47
Other furniture and fixtures.....	2.12	2.13	2.11	2.10	2.08	2.05	2.04	2.03	2.04	2.04	2.03	2.05	2.04	2.02	1.98

See footnotes at end of table.

TABLE C-1. Gross hours and earnings of production workers,<sup>1</sup> by industry—Continued

Revised series; see box, p. 348.

Industry	1964	1963												Annual average	
	Jan. <sup>2</sup>	Dec. <sup>2</sup>	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	Jan.	1962	1961
Average weekly earnings															
Manufacturing—Continued															
Durable goods—Continued															
Stone, clay, and glass products.....	\$99.40	\$100.85	\$103.75	\$105.67	\$104.50	\$104.33	\$104.33	\$104.41	\$103.07	\$101.11	\$99.47	\$97.36	\$97.36	\$98.57	\$95.24
Flat glass.....	134.80	143.45	142.35	139.06	133.00	133.45	139.40	133.51	131.66	130.65	127.92	129.26	126.01	122.68	
Glass and glassware, pressed or blown.....	98.28	97.75	100.50	100.50	98.85	100.90	100.25	101.00	100.10	98.00	100.40	100.65	100.15	98.33	95.44
Cement, hydraulic.....	117.50	116.85	120.30	117.83	118.28	116.47	118.86	116.05	116.48	119.99	112.87	111.63	112.16	112.75	106.52
Structural clay products.....	84.85	88.29	90.45	91.12	90.45	90.69	90.71	90.92	90.71	90.27	86.67	84.77	85.41	86.69	84.45
Pottery and related products.....	91.08	92.23	90.09	89.54	87.85	89.01	90.16	90.46	88.37	89.31	88.14	87.69	86.85	82.13	
Concrete, gypsum, and plaster products.....	96.38	100.45	105.78	112.50	111.05	111.15	110.45	110.01	108.62	103.92	99.48	93.93	94.40	100.98	97.10
Other stone and mineral products.....	103.63	103.91	103.75	104.92	104.25	103.25	104.00	102.92	102.26	100.61	100.12	99.23	98.00	98.33	95.24
Primary metal industries.....	126.07	126.07	123.42	122.41	123.73	123.02	125.77	129.55	127.30	127.82	122.91	122.21	120.80	119.80	114.84
Blast furnace and basic steel products.....	132.80	131.08	128.58	127.59	130.35	130.28	135.20	140.70	138.28	141.70	131.27	129.89	128.44	127.40	122.92
Iron and steel foundries.....	117.87	120.10	116.20	115.08	114.39	111.49	111.78	115.45	112.98	110.15	110.15	110.83	108.14	106.52	98.81
Nonferrous smelting and refining.....	119.39	119.97	119.39	118.98	120.25	119.11	118.12	117.45	118.43	120.12	117.31	116.33	116.20	114.95	110.16
Nonferrous rolling, drawing, and extruding.....	120.98	122.69	120.56	119.14	119.43	118.44	119.00	120.83	118.72	115.23	116.34	116.34	116.89	116.05	111.76
Nonferrous foundries.....	109.82	110.09	108.62	108.21	107.42	106.71	105.41	107.38	106.45	105.01	106.45	106.45	107.38	104.55	100.75
Miscellaneous primary metal industries.....	132.30	134.51	130.73	130.21	130.52	125.56	128.44	129.16	127.10	125.05	126.99	127.60	129.98	124.50	117.16
Average weekly hours															
Stone, clay, and glass products.....	39.6	40.5	41.5	42.1	41.8	41.9	41.9	42.1	41.9	41.1	40.6	39.9	39.9	40.9	40.7
Flat glass.....	40.0	41.7	41.5	40.9	39.7	39.6	41.0	39.5	39.3	39.0	38.3	38.7	38.3	38.7	
Glass and glassware, pressed or blown.....	39.0	39.1	40.2	40.2	39.7	40.2	40.1	40.4	40.2	39.2	40.0	40.1	39.9	40.3	40.1
Cement, hydraulic.....	40.8	41.0	41.2	41.2	41.5	41.3	42.0	41.3	41.6	42.1	40.6	40.3	40.2	41.0	40.5
Structural clay products.....	39.1	40.5	41.3	41.8	41.3	41.6	41.8	41.9	41.8	41.6	40.5	39.8	40.1	40.7	40.6
Pottery and related products.....	39.6	40.1	39.0	39.1	38.7	38.7	39.2	39.5	39.1	39.0	39.0	38.8	39.3	38.2	
Concrete, gypsum, and plaster products.....	39.5	41.0	43.0	45.0	44.6	45.0	44.9	44.9	44.7	43.3	41.8	39.8	40.0	42.6	42.4
Other stone and mineral products.....	40.8	41.4	41.5	41.8	41.7	41.3	41.6	41.5	41.4	40.9	40.7	40.5	40.0	40.8	40.7
Primary metal industries.....	41.2	41.2	40.6	40.4	40.7	40.6	41.1	42.2	41.6	41.5	40.7	40.6	40.4	40.2	39.6
Blast furnace and basic steel products.....	40.0	39.6	39.2	38.9	39.5	39.6	40.6	42.0	41.4	41.8	39.9	39.6	39.4	39.2	38.9
Iron and steel foundries.....	42.4	43.2	42.1	42.0	41.9	41.6	41.4	42.6	42.0	41.1	41.1	41.2	40.5	40.5	38.9
Nonferrous smelting and refining.....	41.6	41.8	41.6	41.6	41.9	41.5	41.3	41.5	41.7	42.0	41.6	41.4	41.5	41.2	40.8
Nonferrous rolling, drawing, and extruding.....	42.6	43.2	42.6	42.4	42.5	42.3	42.5	43.0	42.4	41.6	42.0	42.0	42.2	42.2	41.7
Nonferrous foundries.....	41.6	41.7	41.3	41.3	41.0	41.2	40.7	41.3	41.1	40.7	41.1	41.1	41.3	41.0	40.8
Miscellaneous primary metal industries.....	42.0	42.7	41.9	41.6	41.7	40.9	41.3	41.8	41.4	41.0	41.5	41.7	42.2	41.5	40.4
Average hourly earnings															
Stone, clay, and glass products.....	\$2.51	\$2.49	\$2.50	\$2.51	\$2.50	\$2.49	\$2.49	\$2.48	\$2.46	\$2.46	\$2.45	\$2.44	\$2.44	\$2.41	\$2.34
Flat glass.....	3.37	3.44	3.43	3.40	3.35	3.37	3.40	3.38	3.35	3.35	3.34	3.34	3.29	3.17	
Glass and glassware, pressed or blown.....	2.52	2.50	2.50	2.50	2.49	2.51	2.50	2.50	2.49	2.50	2.51	2.51	2.51	2.44	2.38
Cement, hydraulic.....	2.88	2.85	2.92	2.86	2.85	2.82	2.83	2.81	2.80	2.85	2.78	2.77	2.79	2.75	2.62
Structural clay products.....	2.17	2.18	2.19	2.18	2.19	2.18	2.17	2.17	2.17	2.14	2.13	2.13	2.13	2.08	
Pottery and related products.....	2.30	2.30	2.31	2.29	2.27	2.30	2.30	2.29	2.26	2.29	2.26	2.26	2.21	2.15	
Concrete, gypsum, and plaster products.....	2.44	2.45	2.46	2.50	2.49	2.47	2.46	2.45	2.43	2.40	2.38	2.36	2.36	2.37	2.29
Other stone and mineral products.....	2.54	2.51	2.50	2.51	2.50	2.50	2.50	2.48	2.47	2.46	2.46	2.45	2.41	2.34	
Primary metal industries.....	3.06	3.06	3.04	3.03	3.04	3.03	3.06	3.07	3.06	3.08	3.02	3.01	2.99	2.98	2.90
Blast furnace and basic steel products.....	3.32	3.31	3.28	3.28	3.30	3.29	3.33	3.35	3.34	3.39	3.29	3.28	3.26	3.25	3.16
Iron and steel foundries.....	2.78	2.78	2.76	2.74	2.73	2.68	2.70	2.71	2.69	2.68	2.68	2.69	2.67	2.63	2.54
Nonferrous smelting and refining.....	2.87	2.87	2.87	2.86	2.87	2.87	2.86	2.83	2.84	2.86	2.82	2.81	2.80	2.79	2.70
Nonferrous rolling, drawing, and extruding.....	2.84	2.84	2.83	2.81	2.81	2.80	2.80	2.81	2.80	2.77	2.77	2.77	2.77	2.75	2.68
Nonferrous foundries.....	2.64	2.64	2.63	2.62	2.62	2.59	2.59	2.60	2.59	2.58	2.59	2.59	2.60	2.55	2.50
Miscellaneous primary metal industries.....	3.15	3.15	3.12	3.13	3.13	3.07	3.11	3.09	3.07	3.05	3.06	3.06	3.08	3.00	2.90

See footnotes at end of table.



TABLE C-1. Gross hours and earnings of production workers,<sup>1</sup> by industry—Continued

Revised series; see box, p. 348.

Industry	1964			1963										Annual average	
	Jan. <sup>2</sup>	Dec. <sup>2</sup>	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	Jan.	1962	1961
Average weekly earnings															
Manufacturing—Continued															
Durable goods—Continued															
Fabricated metal products.....	\$108.92	\$110.77	\$109.56	\$109.93	\$110.20	\$108.32	\$107.53	\$108.84	\$108.32	\$104.75	\$105.67	\$105.01	\$105.52	\$104.81	\$100.85
Metal cans.....	128.63	129.13	129.44	125.63	132.01	135.39	132.07	131.94	128.65	125.14	122.59	120.88	122.29	126.30	121.80
Cutlery, hand tools, and general hardware.....	107.64	109.46	108.42	105.32	104.81	101.50	100.35	103.98	104.24	99.70	101.75	101.59	102.59	99.14	93.53
Heating equipment and plumbing fixtures.....	100.08	102.62	102.62	105.06	104.04	102.82	102.47	103.22	100.15	97.86	98.60	98.95	98.95	98.55	94.95
Fabricated structural metal products.....	105.99	108.36	108.36	109.25	109.93	109.78	108.58	108.84	107.53	104.64	104.12	103.60	103.46	104.60	102.06
Screw machine products, bolts, etc.....	109.62	109.98	107.68	109.56	109.65	108.45	106.75	108.80	108.38	105.08	105.26	107.19	108.46	106.00	98.49
Metal stampings.....	120.13	123.26	119.71	120.25	117.70	112.74	113.98	116.75	116.47	112.06	113.57	113.15	113.01	111.76	105.41
Coating, engraving, and allied services.....	96.76	97.34	96.64	96.74	98.05	94.89	93.73	95.63	95.63	92.80	94.12	91.53	92.39	93.84	90.32
Miscellaneous fabricated wire products.....	99.19	99.66	97.58	97.82	98.71	96.52	96.22	97.64	97.58	95.51	97.34	96.93	98.06	96.64	94.07
Miscellaneous fabricated metal products.....	104.66	106.75	104.90	107.53	108.05	106.08	105.71	105.93	106.45	104.23	104.86	104.09	104.75	103.53	100.19
Machinery															
Engines and turbines.....	120.13	120.98	117.88	117.04	117.32	115.23	115.51	117.04	115.79	113.85	115.51	114.82	114.40	113.01	107.42
Farm machinery and equipment.....	128.86	129.90	127.20	123.93	126.48	121.50	122.21	123.73	122.41	119.30	124.23	123.11	120.99	119.88	114.80
Construction and related machinery.....	117.03	116.18	112.16	113.00	112.61	110.16	110.28	111.79	109.07	111.66	112.61	113.16	111.66	107.59	102.66
Metalworking machinery and equipment.....	135.73	135.28	130.33	128.44	127.71	125.83	128.30	130.52	128.90	128.17	130.52	128.76	127.01	125.57	117.04
Special industry machinery.....	112.99	114.05	110.56	110.56	111.09	108.52	109.20	110.33	109.13	107.17	108.88	107.94	110.43	106.77	101.43
General industrial machinery.....	118.43	120.84	117.03	116.62	117.04	114.40	113.16	114.54	112.61	110.16	110.98	110.70	110.43	110.53	105.04
Office, computing, and accounting machines.....	119.02	119.48	118.78	119.07	119.07	116.97	117.14	118.57	115.59	114.33	115.30	114.90	114.21	113.15	111.24
Service industry machines.....	104.49	106.45	103.57	103.83	104.86	104.60	103.22	103.57	103.98	101.15	102.31	100.90	100.90	100.12	95.84
Miscellaneous machinery.....	113.74	113.58	112.25	112.46	111.51	110.83	110.56	112.99	112.04	109.36	110.72	109.62	111.09	109.13	104.00
Average weekly hours															
Fabricated metal products.....	41.1	41.8	41.5	41.8	41.9	41.5	41.2	41.7	41.5	40.6	40.8	40.7	40.9	41.1	40.5
Metal cans.....	41.9	42.2	42.5	41.6	43.0	44.1	43.3	43.4	42.6	41.3	41.0	40.7	40.9	42.1	42.0
Cutlery, hand tools, and general hardware.....	41.4	42.1	41.7	41.3	41.1	40.6	40.3	41.1	41.2	40.2	40.7	40.8	41.2	40.8	39.8
Heating equipment and plumbing fixtures.....	39.4	40.4	40.4	41.2	40.8	40.8	40.5	40.8	39.9	39.3	39.6	39.9	39.9	39.9	39.4
Fabricated structural metal products.....	40.3	41.2	41.2	41.7	41.8	41.9	41.6	41.7	41.2	40.4	40.2	40.0	40.1	40.7	40.5
Screw machine products, bolts, etc.....	42.0	42.3	41.9	42.3	42.5	42.2	41.7	42.5	42.5	41.7	42.0	42.2	42.7	42.4	40.7
Metal stampings.....	42.3	43.4	42.6	43.1	42.8	41.6	41.6	42.3	42.2	41.6	41.6	41.7	41.7	41.7	40.7
Coating, engraving, and allied services.....	41.0	41.6	41.3	41.7	41.9	40.9	40.4	41.4	41.4	40.7	41.1	40.5	40.7	41.3	40.5
Miscellaneous fabricated wire products.....	41.5	41.7	41.0	41.1	41.3	40.9	40.6	41.2	41.0	40.3	40.9	40.9	41.2	41.3	40.9
Miscellaneous fabricated metal products.....	40.1	40.9	40.5	41.2	41.4	40.8	40.5	40.9	41.1	40.4	40.8	40.5	40.6	40.6	40.4
Machinery															
Engines and turbines.....	42.3	42.6	41.8	41.8	41.9	41.6	41.7	42.1	41.8	41.4	41.7	41.6	41.6	41.7	41.0
Farm machinery and equipment.....	41.3	41.5	40.9	40.5	41.2	40.1	40.6	40.7	40.4	39.9	41.0	40.9	40.6	40.5	40.0
Construction and related machinery.....	41.5	41.2	40.2	40.5	40.8	40.5	40.1	40.8	40.1	40.9	41.1	41.3	40.9	40.6	40.1
Metalworking machinery and equipment.....	41.5	42.1	41.7	41.6	41.6	41.5	41.7	42.0	41.7	41.0	41.1	41.1	41.0	41.3	40.5
Special industry machinery.....	44.5	44.5	43.3	43.1	43.0	42.8	43.2	43.8	43.4	43.3	43.8	43.5	43.2	43.3	41.8
General industrial machinery.....	42.8	43.2	42.2	42.2	42.4	41.9	42.0	42.6	42.3	41.7	42.2	42.0	42.3	42.2	41.4
Office, computing, and accounting machines.....	41.7	42.4	41.5	41.5	41.8	41.3	41.0	41.5	41.1	40.5	40.8	40.7	40.9	41.2	40.4
Service industry machines.....	40.9	41.2	41.1	41.2	41.2	40.9	41.1	40.9	40.7	40.4	40.6	40.6	40.5	40.7	41.2
Miscellaneous machinery.....	40.5	41.1	40.3	40.4	40.8	40.7	40.8	41.1	41.1	40.3	40.6	40.2	40.2	40.7	40.1
	42.6	42.7	42.2	42.6	42.4	42.3	42.2	42.8	42.6	41.9	42.1	42.0	42.4	42.3	41.6
Average hourly earnings															
Fabricated metal products.....	\$2.65	\$2.65	\$2.64	\$2.63	\$2.63	\$2.61	\$2.61	\$2.61	\$2.61	\$2.58	\$2.59	\$2.58	\$2.58	\$2.55	\$2.49
Metal cans.....	3.07	3.06	3.06	3.02	3.07	3.07	3.05	3.04	3.02	3.03	2.99	2.97	2.99	3.00	2.90
Cutlery, hand tools, and general hardware.....	2.60	2.60	2.60	2.55	2.55	2.50	2.49	2.53	2.53	2.48	2.50	2.49	2.49	2.43	2.35
Heating equipment and plumbing fixtures.....	2.54	2.54	2.54	2.55	2.55	2.52	2.53	2.53	2.51	2.49	2.49	2.48	2.48	2.47	2.41
Fabricated structural metal products.....	2.63	2.63	2.63	2.62	2.63	2.62	2.61	2.61	2.61	2.59	2.59	2.59	2.58	2.57	2.52
Screw machine products, bolts, etc.....	2.61	2.60	2.57	2.59	2.58	2.57	2.56	2.56	2.55	2.52	2.53	2.54	2.54	2.50	2.42
Metal stampings.....	2.84	2.84	2.81	2.79	2.75	2.71	2.74	2.76	2.76	2.72	2.73	2.72	2.71	2.68	2.59
Coating, engraving, and allied services.....	2.36	2.34	2.34	2.32	2.34	2.32	2.32	2.31	2.31	2.28	2.29	2.26	2.27	2.26	2.23
Miscellaneous fabricated wire products.....	2.39	2.39	2.38	2.38	2.39	2.36	2.37	2.37	2.38	2.37	2.38	2.37	2.38	2.34	2.30
Miscellaneous fabricated metal products.....	2.61	2.61	2.59	2.61	2.61	2.60	2.61	2.59	2.59	2.58	2.57	2.57	2.58	2.55	2.48
Machinery															
Engines and turbines.....	2.84	2.84	2.82	2.80	2.80	2.77	2.77	2.78	2.77	2.75	2.77	2.76	2.75	2.71	2.62
Farm machinery and equipment.....	3.12	3.13	3.11	3.06	3.07	3.03	3.01	3.04	3.03	2.99	3.03	3.01	2.98	2.96	2.87
Construction and related machinery.....	2.82	2.82	2.70	2.79	2.76	2.72	2.75	2.74	2.72	2.73	2.74	2.74	2.73	2.65	2.56
Metalworking machinery and equipment.....	2.82	2.83	2.81	2.81	2.81	2.80	2.78	2.79	2.78	2.77	2.77	2.76	2.75	2.72	2.63
Special industry machinery.....	3.05	3.04	3.01	2.98	2.97	2.94	2.97	2.98	2.97	2.96	2.98	2.96	2.94	2.90	2.80
General industrial machinery.....	2.64	2.64	2.62	2.62	2.62	2.59	2.60	2.59	2.58	2.57	2.58	2.57	2.57	2.53	2.45
Office, computing, and accounting machines.....	2.84	2.85	2.82	2.81	2.80	2.77	2.76	2.76	2.74	2.72	2.72	2.72	2.70	2.69	2.60
Service industry machines.....	2.91	2.90	2.89	2.89	2.89	2.86	2.85	2.85	2.84	2.83	2.84	2.83	2.82	2.78	2.70
Miscellaneous machinery.....	2.58	2.59	2.57	2.57	2.57	2.57	2.53	2.52	2.53	2.51	2.52	2.51	2.51	2.46	2.39
	2.67	2.66	2.66	2.64	2.63	2.62	2.62	2.64	2.63	2.61	2.63	2.61	2.62	2.58	2.50

See footnotes at end of table.

TABLE C-1. Gross hours and earnings of production workers,<sup>1</sup> by industry—Continued

Revised series; see box, p. 348.

Industry	1964		1963												Annual average	
	Jan. <sup>2</sup>	Dec. <sup>2</sup>	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	Jan.	1962	1961	
	Average weekly earnings															
Manufacturing—Continued																
Durable goods—Continued																
Electrical equipment and supplies .....	\$100.65	\$102.66	\$100.60	\$100.28	\$100.53	\$98.74	\$98.89	\$99.88	\$98.74	\$96.87	\$97.84	\$98.09	\$97.93	\$97.44	\$94.47	
Electric distribution equipment.....	109.34	113.84	109.61	109.33	108.92	109.18	106.11	107.98	106.11	103.34	104.78	104.23	102.91	102.87	101.00	
Electrical industrial apparatus.....	105.15	107.79	104.90	104.60	106.30	104.04	105.63	105.73	104.81	102.36	102.97	104.14	102.82	102.00	98.58	
Household appliances.....	107.47	109.08	106.03	108.39	110.92	107.71	110.68	111.22	108.39	106.25	107.71	104.62	103.74	104.23	101.30	
Electric lighting and wiring equip- ment.....	95.12	96.70	94.87	94.37	95.06	93.32	92.86	94.02	93.09	90.00	91.14	90.29	90.52	90.85	87.91	
Radio and TV receiving sets.....	84.70	86.80	86.63	86.72	86.33	85.72	86.76	86.33	86.46	83.00	85.36	86.02	84.92	85.75	82.11	
Communication equipment.....	108.81	110.29	109.08	108.26	108.67	106.67	105.60	106.92	105.99	103.88	106.11	107.30	107.27	106.97	102.72	
Electronic components and acces- sories.....	83.53	84.61	84.19	84.40	82.97	82.37	81.72	82.76	82.97	82.14	83.58	82.35	82.37	82.00	80.40	
Miscellaneous electrical equipment and supplies.....	112.61	114.36	111.64	110.39	108.09	100.40	106.49	109.82	106.23	102.94	103.34	107.27	110.72	106.66	97.11	
Transportation equipment.....	130.71	134.23	132.68	131.52	127.80	121.68	125.58	126.90	125.76	121.54	123.85	123.14	124.74	122.22	113.40	
Motor vehicles and equipment.....	138.88	144.45	142.20	139.60	132.19	122.51	130.54	132.62	131.89	125.44	128.29	127.38	129.63	127.67	114.69	
Aircraft and parts.....	125.63	126.24	124.20	124.83	124.68	122.84	122.13	121.72	120.30	118.90	120.18	121.76	122.64	119.97	114.68	
Ship and boat building and re- pairing.....	117.12	120.09	124.01	123.30	124.01	122.10	120.39	121.77	122.01	119.25	119.95	118.55	118.61	114.97	111.20	
Railroad equipment.....	-----	126.28	124.22	122.71	124.34	116.79	125.36	122.91	119.80	119.10	121.88	115.84	118.89	118.10	108.11	
Other transportation equipment.....	-----	91.71	89.33	93.60	94.73	94.02	94.02	93.86	93.21	91.17	88.66	87.60	85.46	86.22	83.71	
Average weekly hours																
Electrical equipment and supplies .....	40.1	40.9	40.4	40.6	40.7	40.3	40.2	40.6	40.3	39.7	40.1	40.2	40.3	40.6	40.2	
Electric distribution equipment.....	40.2	41.7	40.9	41.1	41.1	41.2	40.5	40.9	40.5	39.9	40.3	40.4	40.2	40.5	40.4	
Electrical industrial apparatus.....	40.6	41.3	40.5	40.7	41.2	40.8	41.1	41.3	41.1	40.3	40.7	41.0	40.8	40.8	40.4	
Household appliances.....	40.1	40.7	40.2	40.9	41.7	40.8	41.3	41.5	40.9	40.4	40.8	40.2	39.9	40.4	40.2	
Electric lighting and wiring equip- ment.....	39.8	40.8	40.2	40.5	40.8	40.4	40.2	40.7	40.3	39.3	39.8	39.6	39.7	40.2	39.6	
Radio and TV receiving sets.....	38.5	39.1	39.2	39.6	39.6	39.5	39.8	39.6	39.3	37.9	38.8	39.1	38.6	39.7	39.1	
Communication equipment.....	40.6	41.0	40.7	40.7	40.7	40.1	40.0	40.5	40.3	39.8	40.5	40.8	41.1	41.3	40.6	
Electronic components and acces- sories.....	39.4	40.1	39.9	40.0	39.7	39.6	39.1	39.6	39.7	39.3	39.8	39.4	39.6	40.0	40.2	
Miscellaneous electrical equipment and supplies.....	41.4	42.2	41.5	41.5	41.1	40.0	40.8	41.6	40.7	39.9	39.9	41.1	42.1	41.5	39.8	
Transportation equipment.....	42.3	43.3	42.8	42.7	41.9	40.8	42.0	42.3	42.2	41.2	41.7	41.6	42.0	42.0	40.5	
Motor vehicles and equipment.....	43.4	45.0	44.3	43.9	42.1	40.3	42.8	43.2	43.1	41.4	42.2	41.9	42.5	42.7	40.1	
Aircraft and parts.....	41.6	41.8	41.4	41.6	41.7	41.5	41.4	41.4	41.2	41.0	41.3	41.7	42.0	41.8	41.4	
Ship and boat building and re- pairing.....	39.7	40.3	41.2	41.1	41.2	40.7	40.4	41.0	41.5	40.7	40.8	40.6	40.9	40.2	40.0	
Railroad equipment.....	-----	41.0	40.2	40.1	40.9	38.8	41.1	40.7	40.2	40.1	40.9	39.4	40.3	39.9	38.2	
Other transportation equipment.....	-----	40.4	39.7	41.6	42.1	41.6	41.6	41.9	41.8	40.7	40.3	40.0	39.2	40.1	39.3	
Average hourly earnings																
Electrical equipment and supplies .....	\$2.51	\$2.51	\$2.49	\$2.47	\$2.47	\$2.45	\$2.46	\$2.46	\$2.45	\$2.44	\$2.44	\$2.44	\$2.43	\$2.40	\$2.35	
Electric distribution equipment.....	2.72	2.73	2.68	2.66	2.65	2.65	2.62	2.64	2.62	2.59	2.60	2.58	2.56	2.54	2.50	
Electrical industrial apparatus.....	2.59	2.61	2.59	2.57	2.58	2.55	2.57	2.56	2.55	2.54	2.53	2.54	2.52	2.50	2.44	
Household appliances.....	2.68	2.68	2.66	2.65	2.66	2.64	2.68	2.68	2.65	2.63	2.64	2.60	2.60	2.58	2.52	
Electric lighting and wiring equip- ment.....	2.39	2.37	2.36	2.33	2.33	2.31	2.31	2.31	2.31	2.29	2.29	2.28	2.28	2.26	2.22	
Radio and TV receiving sets.....	2.20	2.22	2.21	2.19	2.18	2.17	2.18	2.18	2.20	2.19	2.20	2.20	2.20	2.16	2.10	
Communication equipment.....	2.68	2.69	2.68	2.66	2.67	2.66	2.64	2.64	2.63	2.61	2.62	2.63	2.61	2.59	2.53	
Electronic components and acces- sories.....	2.12	2.11	2.11	2.11	2.09	2.08	2.09	2.09	2.09	2.09	2.10	2.09	2.08	2.05	2.00	
Miscellaneous electrical equipment and supplies.....	2.72	2.71	2.69	2.66	2.63	2.51	2.61	2.64	2.61	2.58	2.59	2.61	2.63	2.57	2.44	
Transportation equipment.....	3.09	3.10	3.10	3.08	3.05	2.98	2.99	3.00	2.98	2.95	2.97	2.96	2.97	2.91	2.80	
Motor vehicles and equipment.....	3.20	3.21	3.21	3.18	3.14	3.04	3.05	3.07	3.06	3.03	3.04	3.04	3.05	2.99	2.86	
Aircraft and parts.....	3.02	3.02	3.00	2.99	2.99	2.96	2.95	2.94	2.92	2.90	2.91	2.92	2.92	2.87	2.77	
Ship and boat building and re- pairing.....	2.95	2.98	3.01	3.00	3.01	3.00	2.98	2.97	2.94	2.93	2.94	2.92	2.90	2.86	2.78	
Railroad equipment.....	-----	3.08	3.09	3.06	3.04	3.01	3.05	3.02	2.98	2.97	2.98	2.94	2.95	2.96	2.83	
Other transportation equipment.....	-----	2.27	2.25	2.25	2.25	2.26	2.26	2.24	2.23	2.24	2.20	2.19	2.18	2.15	2.13	

See footnotes at end of table.

TABLE C-1. Gross hours and earnings of production workers,<sup>1</sup> by industry—Continued

Revised series; see box, p. 348.

Industry	1964	1963												Annual average	
	Jan. <sup>2</sup>	Dec. <sup>1</sup>	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	Jan.	1962	1961
Average weekly earnings															
Manufacturing—Continued															
Durable goods—Continued															
Instruments and related products.....	\$102.16	\$102.91	\$102.91	\$102.75	\$102.75	\$101.34	\$100.94	\$101.84	\$100.94	\$99.14	\$101.18	\$101.18	\$99.88	\$99.80	\$96.87
Engineering and scientific instruments.....	-----	119.65	119.65	120.22	19.65	118.94	116.85	119.11	115.87	114.86	118.69	119.26	117.20	116.64	112.07
Mechanical measuring and control devices.....	104.14	103.48	104.24	104.14	104.24	102.41	101.50	103.07	102.56	100.10	101.09	99.70	98.74	98.98	95.91
Optical and ophthalmic goods.....	93.79	95.15	94.05	95.15	94.28	92.32	92.13	93.44	94.08	93.02	93.66	93.02	92.80	89.62	86.92
Surgical, medical, and dental equipment.....	84.50	86.22	86.00	85.60	87.10	85.22	85.65	86.30	84.21	82.58	83.39	83.70	82.97	84.45	81.81
Photographic equipment and supplies.....	117.29	117.86	117.31	117.31	116.33	113.70	114.80	113.40	113.15	111.78	114.26	115.51	113.44	114.26	110.09
Watches and clocks.....	-----	82.74	81.93	82.78	83.79	83.35	82.32	82.50	84.14	82.50	83.53	83.74	82.29	83.37	80.58
Miscellaneous manufacturing industries.....	81.74	82.59	81.59	81.40	80.60	79.60	79.18	80.19	79.40	79.17	80.39	80.19	79.58	78.21	75.84
Jewelry, silverware, and plated ware.....	89.47	94.95	92.06	92.13	90.20	87.23	86.29	88.70	87.02	85.54	86.40	85.36	85.60	84.82	81.81
Toys, amusement, and sporting goods.....	-----	72.96	73.14	73.68	72.71	71.74	71.42	72.17	72.37	71.63	73.14	73.34	73.15	71.37	70.17
Pens, pencils, office and art materials.....	-----	79.38	78.00	78.76	76.64	79.38	77.81	79.38	77.41	76.43	77.02	78.59	76.44	74.82	72.86
Costume jewelry, buttons, and notions.....	-----	76.76	75.01	75.76	75.55	73.23	71.16	74.19	72.89	71.97	73.05	72.65	71.39	71.68	68.78
Other manufacturing industries.....	87.91	89.02	87.82	88.04	87.20	86.30	86.15	86.58	86.00	85.10	86.40	85.97	85.14	84.82	81.79
Average weekly hours															
Instruments and related products.....	40.7	41.0	41.0	41.1	41.1	40.7	40.7	40.9	40.7	40.3	40.8	40.8	40.6	40.9	40.7
Engineering and scientific instruments.....	-----	41.4	41.4	41.6	41.4	41.3	41.0	41.5	40.8	40.3	41.5	41.7	41.3	41.3	40.9
Mechanical measuring and control devices.....	41.0	40.9	41.2	41.0	41.2	40.8	40.6	40.9	40.7	40.2	40.6	40.2	40.8	40.4	40.3
Optical and ophthalmic goods.....	41.5	42.1	41.8	42.1	41.9	41.4	41.5	41.9	42.0	41.9	42.0	41.9	41.8	41.3	41.0
Surgical, medical, and dental equipment.....	39.3	40.1	40.0	40.0	40.7	40.2	40.4	40.9	40.1	39.7	39.9	39.9	39.7	40.6	40.3
Photographic equipment and supplies.....	41.3	41.5	41.6	41.6	41.4	40.9	41.0	40.5	40.7	40.5	41.1	41.4	41.1	41.7	41.7
Watches and clocks.....	-----	39.4	39.2	39.8	39.9	39.5	39.2	39.1	39.5	39.1	39.4	39.5	39.0	39.7	39.5
Miscellaneous manufacturing industries.....	39.3	39.9	39.8	40.1	39.9	39.8	39.2	39.7	39.5	39.0	39.6	39.5	39.2	39.7	39.5
Jewelry, silverware, and plated ware.....	40.3	42.2	41.1	41.5	41.0	40.2	39.4	40.5	40.1	39.6	40.0	39.7	40.0	40.2	40.3
Toys, amusement, and sporting goods.....	-----	38.2	38.7	39.4	39.3	39.2	38.4	38.8	38.7	38.1	38.7	38.4	38.3	39.0	39.2
Pens, pencils, office and art materials.....	-----	40.5	40.0	40.6	39.1	40.5	39.7	40.5	39.9	39.6	39.7	40.3	39.4	39.8	39.6
Costume jewelry, buttons, and notions.....	-----	40.4	39.9	40.3	40.4	39.8	39.1	40.1	39.4	38.9	39.7	39.7	38.8	39.6	39.3
Other manufacturing industries.....	39.6	40.1	40.1	40.2	40.0	40.0	39.7	39.9	40.0	39.4	40.0	39.8	39.6	40.2	39.7
Average hourly earnings															
Instruments and related products.....	\$2.51	\$2.51	\$2.51	\$2.50	\$2.50	\$2.49	\$2.48	\$2.49	\$2.48	\$2.46	\$2.48	\$2.48	\$2.46	\$2.44	\$2.38
Engineering and scientific instruments.....	-----	2.89	2.89	2.89	2.89	2.88	2.85	2.87	2.84	2.85	2.86	2.86	2.84	2.80	2.74
Mechanical measuring and control devices.....	2.54	2.53	2.53	2.54	2.53	2.51	2.50	2.52	2.52	2.49	2.49	2.48	2.45	2.45	2.38
Optical and ophthalmic goods.....	2.26	2.26	2.25	2.26	2.25	2.23	2.22	2.23	2.24	2.22	2.23	2.22	2.22	2.17	2.12
Surgical, medical, and dental equipment.....	2.15	2.15	2.15	2.14	2.14	2.12	2.12	2.11	2.10	2.08	2.09	2.10	2.09	2.08	2.03
Photographic equipment and supplies.....	2.84	2.84	2.82	2.82	2.81	2.78	2.80	2.80	2.78	2.76	2.78	2.79	2.76	2.74	2.64
Watches and clocks.....	-----	2.10	2.09	2.08	2.10	2.11	2.10	2.11	2.13	2.11	2.12	2.12	2.11	2.10	2.04
Miscellaneous manufacturing industries.....	2.08	2.07	2.05	2.03	2.02	2.00	2.02	2.02	2.01	2.03	2.03	2.03	2.03	1.97	1.92
Jewelry, silverware, and plated ware.....	2.22	2.25	2.24	2.22	2.20	2.17	2.19	2.19	2.17	2.16	2.16	2.15	2.14	2.11	2.03
Toys, amusement, and sporting goods.....	-----	1.91	1.89	1.87	1.85	1.83	1.86	1.86	1.87	1.88	1.89	1.91	1.91	1.83	1.79
Pens, pencils, office and art materials.....	-----	1.86	1.95	1.94	1.96	1.96	1.96	1.96	1.94	1.93	1.94	1.95	1.94	1.88	1.84
Costume jewelry, buttons, and notions.....	-----	1.90	1.88	1.88	1.87	1.84	1.82	1.85	1.85	1.85	1.84	1.83	1.84	1.81	1.75
Other manufacturing industries.....	2.22	2.22	2.19	2.19	2.18	2.17	2.17	2.17	2.15	2.16	2.16	2.16	2.15	2.11	2.06

See footnotes at end of table.



TABLE C-1. Gross hours and earnings of production workers,<sup>1</sup> by industry—Continued

Revised series; see box, p. 348.

Industry	1963														Annual average	
	Jan. <sup>2</sup>	Dec. <sup>2</sup>	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	Jan.	1962	1961	
Manufacturing—Continued	Average weekly earnings															
Nondurable goods																
Food and kindred products.....	\$95.75	\$96.59	\$95.94	\$94.35	\$95.68	\$93.98	\$95.63	\$95.17	\$94.66	\$92.40	\$93.32	\$92.63	\$92.52	\$91.62	\$88.75	
Meat products.....	106.08	107.78	107.95	101.84	104.58	99.22	100.94	101.43	101.11	97.66	98.85	97.46	100.19	98.66	96.52	
Dairy products.....	100.02	99.90	99.66	99.48	101.15	98.79	99.92	99.92	98.33	97.02	97.48	96.79	97.29	96.05	93.08	
Canned and preserved food, except meats.....		73.63	71.39	77.03	80.40	78.38	75.08	73.06	74.03	72.96	74.84	73.26	73.13	73.53	70.67	
Grain mill products.....	107.16	106.28	108.38	108.31	107.81	105.73	107.87	105.33	103.01	99.49	101.99	102.93	103.64	101.92	99.01	
Bakery products.....	93.46	94.87	94.64	94.71	95.34	94.37	96.17	95.63	94.19	92.00	91.37	91.31	90.68	91.30	88.04	
Sugar.....		97.68	94.61	94.50	104.09	107.87	107.26	104.49	110.14	105.18	104.75	101.18	96.93	97.75	95.27	
Confectionery and related products.....	77.01	77.81	77.81	80.19	82.00	79.79	79.60	81.00	77.62	75.64	77.62	76.64	76.44	76.61	73.42	
Beverages.....	101.38	105.47	107.20	108.26	107.59	108.73	112.25	111.25	107.30	106.11	105.46	102.05	101.79	103.31	99.85	
Miscellaneous food and kindred products.....	95.37	96.77	96.78	95.27	94.37	94.53	93.66	92.57	92.60	90.67	91.76	92.86	92.65	91.38	87.34	
Tobacco manufactures.....	73.53	75.45	73.13	71.46	71.46	73.57	78.76	81.81	78.17	68.71	73.11	69.70	73.15	71.41	69.42	
Cigarettes.....		93.67	96.82	99.55	93.06	97.06	93.87	98.75	98.29	82.95	88.22	85.51	90.32	89.54	85.72	
Cigars.....		63.41	63.18	63.73	61.85	61.69	60.42	61.44	58.46	53.72	58.56	58.99	59.57	57.82	56.02	
Textile mill products.....	70.05	72.51	72.28	71.04	69.83	69.19	68.68	69.70	69.02	67.26	68.51	68.00	67.26	68.21	65.04	
Cotton broad woven fabrics.....	73.08	73.60	73.35	69.97	67.40	67.65	66.66	67.32	66.99	66.50	66.33	65.84	66.66	66.75	63.20	
Silk and synthetic broad woven fabrics.....	76.56	79.64	78.84	75.52	74.30	4.04	73.10	74.39	74.91	72.49	73.35	73.35	73.35	73.44	68.72	
Weaving and finishing broad woolsens.....	75.81	75.62	71.94	73.71	74.85	73.89	76.49	77.04	76.31	74.21	76.86	76.49	75.35	77.17	72.28	
Narrow fabrics and smallwares.....	71.20	73.28	72.51	72.10	71.58	70.47	71.28	72.04	71.28	69.26	69.77	70.18	70.69	70.93	68.11	
Knitting.....	59.81	62.79	64.30	65.30	64.80	63.90	62.76	63.41	62.37	59.94	61.07	60.59	59.94	61.44	59.21	
Finishing textiles, except wool and knit.....	80.10	84.83	83.76	80.51	78.73	78.02	75.89	80.89	79.29	78.35	80.09	79.15	75.48	78.07	74.70	
Floor covering.....		77.29	78.74	77.15	78.01	75.60	73.75	75.30	72.67	71.73	76.50	74.80	71.86	73.04	71.05	
Yarn and thread.....	63.76	66.33	66.08	64.94	63.67	63.43	63.90	64.63	63.65	62.16	62.56	61.54	60.61	62.22	59.55	
Miscellaneous textile goods.....	78.61	83.60	83.20	82.96	80.95	80.75	80.95	83.95	80.95	78.76	79.73	79.73	78.98	78.91	75.36	
Average weekly hours																
Food and kindred products.....	40.4	41.1	41.0	41.2	41.6	41.4	41.4	41.2	40.8	40.0	40.4	40.1	40.4	40.9	40.9	
Meat products.....	41.6	42.6	42.5	41.4	42.0	41.0	41.2	41.4	41.1	39.7	39.7	39.3	40.4	40.6	40.9	
Dairy products.....	41.5	41.8	41.7	41.8	42.5	42.4	42.7	42.7	42.2	42.0	42.2	41.9	42.3	42.5	42.5	
Canned and preserved food, except meats.....		37.0	36.8	39.1	40.4	40.4	38.9	36.9	37.2	36.3	37.8	37.0	37.5	38.7	38.2	
Grain mill products.....	44.1	44.1	44.6	45.7	45.3	44.8	45.9	45.4	44.4	42.7	43.4	43.8	44.1	44.7	44.8	
Bakery products.....	39.6	40.2	40.1	40.3	40.4	40.5	41.1	41.0	40.6	40.0	39.9	39.7	39.6	40.4	40.2	
Sugar.....		44.0	43.2	42.0	40.5	42.3	41.9	41.3	42.2	40.3	41.9	40.8	40.9	42.5	43.5	
Confectionery and related products.....	38.7	39.7	39.7	40.5	41.0	40.3	39.6	40.5	39.2	38.2	39.6	39.3	39.4	39.9	39.9	
Beverages.....	38.4	39.5	40.0	40.7	40.6	41.5	42.2	42.3	40.8	40.5	40.1	39.4	39.3	40.2	40.1	
Miscellaneous food and kindred products.....	42.2	43.2	43.4	43.5	42.7	42.2	42.0	41.7	41.9	41.4	41.9	42.4	42.5	42.7	42.4	
Tobacco manufactures.....	38.1	39.5	38.9	39.7	39.7	40.2	38.8	40.3	38.7	34.7	37.3	36.3	38.5	38.6	39.0	
Cigarettes.....		40.2	41.2	38.6	39.6	41.3	39.9	42.2	40.8	35.6	37.7	36.7	39.1	39.1	39.5	
Cigars.....		38.9	39.0	39.1	38.9	38.8	38.0	38.4	37.0	34.0	37.3	37.1	37.7	37.3	37.6	
Textile mill products.....	39.8	41.2	41.3	41.3	40.6	40.7	40.4	41.0	40.6	39.8	40.3	40.0	39.8	40.6	39.9	
Cotton broad woven fabrics.....	42.0	42.3	42.4	41.9	40.6	41.0	40.4	40.8	40.6	40.3	40.2	39.9	40.4	40.7	40.0	
Silk and synthetic broad woven fabrics.....	42.3	44.0	43.8	43.4	42.7	42.8	42.5	43.0	43.3	41.9	42.4	42.4	42.4	42.7	41.4	
Weaving and finishing broad woolsens.....	41.2	41.1	39.1	40.5	40.9	40.6	41.8	42.1	41.7	41.0	42.0	41.8	41.4	42.4	41.3	
Narrow fabrics and smallwares.....	40.0	41.4	41.2	41.2	40.9	40.5	41.2	41.4	41.2	40.5	40.8	40.8	41.1	41.0	40.3	
Knitting.....	35.6	37.6	38.5	39.1	38.8	39.2	38.5	38.9	38.5	37.0	37.7	37.4	37.0	38.4	38.2	
Finishing textiles, except wool and knit.....	41.5	43.5	43.4	42.6	42.1	41.5	40.8	42.8	42.4	41.9	42.6	42.1	40.8	42.2	41.5	
Floor covering.....		42.7	43.5	43.1	43.1	42.0	41.2	41.6	40.6	40.3	42.5	42.5	40.6	41.5	40.6	
Yarn and thread.....	39.6	41.2	41.3	41.1	40.3	40.4	40.7	41.1	40.8	40.1	40.1	39.7	39.1	40.4	39.7	
Miscellaneous textile goods.....	39.5	41.8	41.6	41.9	41.3	41.2	41.3	42.4	41.3	40.6	41.1	41.1	40.5	41.1	40.3	
Average hourly earnings																
Food and kindred products.....	\$2.37	\$2.35	\$2.34	\$2.29	\$2.30	\$2.27	\$2.31	\$2.31	\$2.32	\$2.31	\$2.31	\$2.31	\$2.29	\$2.24	\$2.17	
Meat products.....	2.55	2.53	2.54	2.46	2.49	2.42	2.45	2.45	2.46	2.46	2.49	2.48	2.48	2.43	2.36	
Dairy products.....	2.41	2.39	2.39	2.38	2.35	2.33	2.34	2.34	2.33	2.31	2.31	2.31	2.30	2.26	2.19	
Canned and preserved food, except meats.....		1.99	1.94	1.97	1.99	1.94	1.93	1.98	1.99	2.01	1.98	1.98	1.95	1.90	1.85	
Grain mill products.....	2.43	2.41	2.43	2.37	2.38	2.36	2.35	2.32	2.32	2.33	2.35	2.35	2.35	2.28	2.21	
Bakery products.....	2.36	2.36	2.36	2.35	2.36	2.33	2.34	2.33	2.32	2.30	2.29	2.30	2.29	2.26	2.19	
Sugar.....		2.22	2.19	2.25	2.57	2.55	2.56	2.53	2.61	2.61	2.50	2.48	2.37	2.30	2.19	
Confectionery and related products.....	1.99	1.96	1.96	1.98	2.00	1.98	2.01	2.00	1.98	1.98	1.96	1.95	1.94	1.92	1.84	
Beverages.....	2.64	2.67	2.68	2.66	2.65	2.62	2.66	2.63	2.63	2.62	2.63	2.59	2.59	2.57	2.49	
Miscellaneous food and kindred products.....	2.26	2.24	2.23	2.19	2.21	2.24	2.23	2.22	2.21	2.19	2.19	2.19	2.18	2.14	2.06	
Tobacco manufactures.....	1.93	1.91	1.88	1.80	1.80	1.83	2.03	2.03	2.02	1.98	1.96	1.92	1.90	1.85	1.78	
Cigarettes.....		2.33	2.35	2.32	2.35	2.35	2.34	2.34	2.36	2.33	2.34	2.33	2.31	2.29	2.17	
Cigars.....		1.63	1.62	1.63	1.59	1.59	1.59	1.60	1.58	1.58	1.57	1.59	1.58	1.55	1.49	
Textile mill products.....	1.76	1.76	1.75	1.72	1.72	1.70	1.70	1.70	1.70	1.69	1.70	1.70	1.69	1.68	1.63	
Cotton broad woven fabrics.....	1.74	1.74	1.73	1.67	1.66	1.65	1.65	1.65	1.65	1.65	1.65	1.65	1.65	1.64	1.58	
Silk and synthetic broad woven fabrics.....	1.81	1.81	1.80	1.74	1.74	1.73	1.72	1.73	1.73	1.73	1.73	1.73	1.73	1.72	1.66	
Weaving and finishing broad woolsens.....	1.84	1.84	1.84	1.82	1.83	1.82	1.83	1.83	1.83	1.81	1.83	1.83	1.82	1.82	1.75	
Narrow fabrics and smallwares.....	1.78	1.77	1.76	1.75	1.75	1.74	1.73	1.74	1.73	1.71	1.71	1.72	1.72	1.73	1.69	
Knitting.....	1.68	1.67	1.67	1.67	1.67	1.63	1.63	1.63	1.62	1.62	1.62	1.62	1.62	1.60	1.55	
Finishing textiles, except wool and knit.....	1.93	1.95	1.93	1.89	1.87	1.88	1.86	1.89	1.87	1.87	1.88	1.88	1.85	1.85	1.80	
Floor covering.....		1.81	1.81	1.79	1.81	1.80	1.79	1.81	1.79	1.78	1.80	1.76	1.77	1.76	1.75	
Yarn and thread.....	1.61	1.61	1.60	1.58	1.58	1.57	1.57	1.57	1.56	1.55	1.56	1.55	1.55	1.54	1.80	
Miscellaneous textile goods.....	1.99	2.00	2.00	1.98	1.96	1.96	1.96	1.98	1.96	1.94	1.94	1.94	1.95	1.92	1.57	

See footnotes at end of table.

TABLE C-1. Gross hours and earnings of production workers,<sup>1</sup> by industry—Continued

Revised series; see box, p. 348.

Industry	1964	1963												Annual average	
	Jan. <sup>2</sup>	Dec. <sup>2</sup>	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	Jan.	1962	1961
Manufacturing—Continued															
Nondurable goods—Continued															
Average weekly earnings															
Apparel and related products.....	\$60.36	\$63.54	\$63.01	\$64.25	\$64.25	\$63.30	\$61.71	\$61.35	\$61.52	\$60.16	\$62.59	\$61.54	\$60.35	\$61.18	\$58.06
Men's and boys' suits and coats.....	72.73	77.49	76.59	77.33	76.33	77.07	74.37	78.17	74.03	70.76	73.48	72.93	71.57	72.54	67.78
Men's and boys' furnishings.....	53.66	55.57	54.96	55.87	56.17	55.01	54.58	54.05	53.91	52.48	53.28	52.91	52.85	53.53	49.87
Women's, misses', and juniors' outerwear.....	63.31	65.38	63.74	67.18	67.18	66.97	65.17	62.68	64.33	64.67	68.35	66.28	63.65	64.45	61.61
Women's and children's undergarments.....	54.22	58.77	60.00	60.58	60.64	58.59	55.94	56.00	56.15	53.66	56.52	55.02	54.11	55.48	54.02
Hats, caps, and millinery.....	53.56	55.58	56.25	58.08	57.32	56.27	56.15	56.61	55.85	52.44	55.54	55.85	54.67	54.72	52.75
Fur goods and miscellaneous apparel.....	-----	67.66	69.73	69.55	66.98	65.87	64.62	64.80	63.19	58.47	62.83	61.06	63.19	64.98	62.65
Miscellaneous fabricated textile products.....	65.88	70.41	69.63	69.27	69.60	66.78	64.53	66.85	66.47	64.90	65.02	64.47	64.18	64.26	62.75
Paper and allied products.....	106.77	108.11	107.43	108.43	108.43	107.32	106.82	106.21	104.55	102.24	104.13	102.93	103.21	102.00	99.45
Paper and pulp.....	117.89	118.70	119.41	119.51	119.34	119.34	120.42	117.31	116.87	114.23	116.42	115.02	115.46	112.92	109.69
Paperboard.....	121.16	122.43	120.12	121.76	121.11	121.04	122.03	119.97	117.48	115.01	117.40	115.02	114.93	114.22	109.44
Converted paper and paperboard products.....	95.40	98.41	95.49	95.76	95.99	94.92	92.74	93.60	91.84	90.09	91.43	90.98	91.84	90.64	87.54
Paperboard containers and boxes.....	97.34	98.23	98.05	99.88	99.64	97.67	96.05	97.44	94.99	92.75	94.30	92.97	92.80	94.24	91.10
Printing, publishing, and allied industries.....	111.25	114.27	110.78	111.74	112.71	111.27	110.02	110.69	110.21	108.97	110.21	108.20	107.16	107.62	105.05
Newspaper publishing and printing.....	112.94	118.24	114.61	114.30	113.98	112.89	111.91	113.20	113.52	111.19	109.74	108.42	107.16	110.35	107.45
Periodical publishing and printing.....	-----	116.91	116.51	118.48	120.60	116.98	118.78	115.49	112.58	113.58	116.18	112.97	106.65	111.95	109.81
Books.....	-----	105.26	101.27	104.66	107.94	108.52	105.78	105.97	106.14	103.28	103.57	100.98	100.84	99.85	96.06
Commercial printing.....	113.00	115.63	112.81	113.68	115.34	112.71	112.03	112.32	112.22	110.58	113.18	110.87	109.52	110.15	106.20
Bookbinding and related industries.....	87.98	90.02	88.46	88.17	88.39	88.08	87.40	88.24	88.69	87.17	88.01	85.95	86.71	85.91	82.35
Other publishing and printing industries.....	117.21	117.41	113.28	113.87	114.43	114.94	113.37	112.60	112.01	111.81	115.71	114.55	113.68	110.59	108.96
Average weekly hours															
Apparel and related products.....	34.1	35.9	35.8	36.3	36.3	36.8	36.3	36.3	36.4	35.6	36.6	36.2	35.5	36.2	35.4
Men's and boys' suits and coats.....	34.8	36.9	36.3	36.5	36.2	36.7	36.1	37.4	37.2	36.1	37.3	37.4	36.7	37.2	35.3
Men's and boys' furnishings.....	35.3	36.8	36.4	37.0	37.2	38.2	37.9	37.8	37.7	36.7	37.0	37.0	36.7	37.7	36.4
Women's, misses', and juniors' outerwear.....	32.3	33.7	33.2	34.1	34.1	34.7	34.3	33.7	34.4	34.4	35.6	34.7	33.5	34.1	33.3
Women's and children's undergarments.....	33.8	36.5	37.5	38.1	37.9	37.8	36.8	36.6	36.7	35.2	36.7	36.2	35.6	36.5	36.5
Hats, caps, and millinery.....	-----	35.7	35.4	35.5	35.4	36.4	36.1	36.4	35.7	33.8	37.1	35.7	35.0	36.2	35.7
Girls' and children's outerwear.....	33.9	35.4	35.6	36.3	35.6	36.3	36.7	37.0	36.5	34.5	36.3	36.5	35.8	36.0	35.4
Fur goods and miscellaneous apparel.....	-----	35.8	36.7	36.8	36.4	36.8	35.9	36.0	35.5	34.6	35.7	35.5	35.7	36.1	35.8
Miscellaneous fabricated textile products.....	36.2	38.9	38.9	38.7	39.1	38.6	37.3	38.2	38.2	37.3	37.8	37.7	37.1	37.8	37.8
Paper and allied products.....	42.2	42.9	42.8	43.2	43.2	43.1	42.9	43.0	42.5	41.9	42.5	42.2	42.3	42.5	42.5
Paper and pulp.....	43.5	43.8	43.9	44.1	44.2	44.2	44.6	44.1	44.1	43.6	44.1	43.9	43.9	43.6	43.7
Paperboard.....	43.9	44.2	44.0	44.6	44.2	44.5	44.7	44.6	44.0	43.4	44.3	43.9	43.7	44.1	43.6
Converted paper and paperboard products.....	41.3	42.6	41.7	42.0	42.1	42.0	41.4	41.6	41.0	40.4	41.0	40.8	41.0	41.2	41.1
Paperboard containers and boxes.....	40.9	41.8	41.9	42.5	42.4	42.1	41.4	42.0	41.3	40.5	41.0	40.6	40.7	41.7	41.6
Printing, publishing, and allied industries.....	38.1	39.0	38.2	38.4	38.6	38.5	38.2	38.3	38.4	38.1	38.4	38.1	38.0	38.3	38.2
Newspaper publishing and printing.....	36.2	37.3	36.5	36.4	36.3	36.3	36.1	36.4	36.5	36.1	36.1	35.9	35.6	36.3	36.3
Periodical publishing and printing.....	-----	39.9	39.9	40.3	40.2	40.2	40.4	40.1	39.5	39.3	40.2	39.5	39.5	39.7	39.5
Books.....	-----	40.8	39.1	40.1	41.2	41.2	41.0	40.6	41.3	40.5	40.3	39.6	39.7	40.1	40.6
Commercial printing.....	38.7	39.6	38.9	39.2	39.5	39.0	38.9	39.0	39.1	38.8	39.3	38.9	38.7	39.2	38.9
Bookbinding and related industries.....	37.6	38.8	38.8	38.5	38.6	38.8	38.5	38.7	38.9	38.4	38.6	38.2	38.2	38.7	38.3
Other publishing and printing industries.....	39.2	39.4	38.4	38.6	38.4	38.7	38.3	38.3	38.1	37.9	38.7	38.7	38.8	38.4	38.5
Average hourly earnings															
Apparel and related products.....	\$1.77	\$1.77	\$1.76	\$1.77	\$1.77	\$1.72	\$1.70	\$1.69	\$1.69	\$1.69	\$1.71	\$1.70	\$1.69	\$1.69	\$1.64
Men's and boys' suits and coats.....	2.09	2.10	2.11	2.12	2.11	2.10	2.06	2.09	1.99	1.96	1.97	1.95	1.95	1.95	1.92
Men's and boys' furnishings.....	1.52	1.51	1.51	1.51	1.51	1.44	1.44	1.43	1.43	1.43	1.44	1.43	1.44	1.42	1.37
Women's, misses', and juniors' outerwear.....	1.96	1.94	1.92	1.97	1.97	1.93	1.90	1.86	1.87	1.88	1.92	1.91	1.90	1.89	1.85
Women's and children's undergarments.....	1.61	1.61	1.60	1.59	1.60	1.55	1.52	1.53	1.53	1.53	1.54	1.52	1.52	1.52	1.48
Hats, caps, and millinery.....	-----	1.87	1.81	1.89	1.90	1.87	1.85	1.78	1.75	1.78	1.87	1.87	1.82	1.81	1.77
Girls' and children's outerwear.....	1.58	1.57	1.58	1.60	1.61	1.55	1.53	1.53	1.53	1.52	1.53	1.53	1.54	1.52	1.49
Fur goods and miscellaneous apparel.....	-----	1.89	1.90	1.89	1.84	1.79	1.80	1.80	1.78	1.69	1.76	1.72	1.77	1.80	1.75
Miscellaneous fabricated textile products.....	1.82	1.81	1.79	1.79	1.78	1.73	1.73	1.75	1.74	1.74	1.72	1.71	1.73	1.70	1.66
Paper and allied products.....	2.53	2.52	2.51	2.51	2.51	2.49	2.49	2.47	2.46	2.44	2.45	2.44	2.44	2.40	2.34
Paper and pulp.....	2.71	2.71	2.72	2.71	2.70	2.70	2.70	2.66	2.65	2.62	2.64	2.62	2.63	2.59	2.51
Paperboard.....	2.76	2.77	2.73	2.73	2.74	2.72	2.73	2.69	2.67	2.65	2.65	2.62	2.63	2.59	2.51
Converted paper and paperboard products.....	2.31	2.31	2.29	2.28	2.28	2.26	2.24	2.25	2.24	2.23	2.23	2.23	2.24	2.20	2.13
Paperboard containers and boxes.....	2.38	2.35	2.34	2.35	2.35	2.32	2.32	2.32	2.30	2.29	2.30	2.29	2.28	2.26	2.19
Printing, publishing, and allied industries.....	2.92	2.93	2.90	2.91	2.92	2.89	2.88	2.89	2.87	2.86	2.87	2.84	2.82	2.81	2.75
Newspaper publishing and printing.....	3.12	3.17	3.14	3.14	3.14	3.11	3.10	3.11	3.11	3.08	3.04	3.02	3.01	3.04	2.96
Periodical publishing and printing.....	-----	2.63	2.92	2.94	3.00	2.91	2.94	2.88	2.85	2.89	2.89	2.86	2.77	2.82	2.78
Books.....	-----	2.58	2.59	2.61	2.62	2.59	2.58	2.61	2.57	2.55	2.57	2.55	2.54	2.49	2.44
Commercial printing.....	2.92	2.92	2.90	2.90	2.92	2.89	2.88	2.88	2.87	2.85	2.88	2.85	2.83	2.81	2.73
Bookbinding and related industries.....	2.34	2.32	2.28	2.29	2.29	2.27	2.27	2.28	2.28	2.27	2.28	2.25	2.27	2.22	2.15
Other publishing and printing industries.....	2.99	2.98	2.95	2.95	2.98	2.97	2.96	2.94	2.94	2.95	2.99	2.96	2.93	2.88	2.83

See footnotes at end of table.

TABLE C-1. Gross hours and earnings of production workers,<sup>1</sup> by industry—Continued

Revised series; see box, p. 348.

Industry	1964				1963										Annual average	
	Jan.	Dec. 1	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	Jan.	1962	1961	
Average weekly earnings																
Manufacturing—Continued																
Nondurable goods—Continued																
Chemicals and allied products.....	\$115.65	\$114.82	\$113.85	\$113.85	\$114.13	\$113.02	\$113.98	\$113.42	\$112.59	\$113.40	\$111.37	\$110.83	\$111.10	\$109.98	\$106.81	
Industrial chemicals.....	132.40	130.42	129.27	129.79	128.96	127.71	128.33	127.60	126.58	130.82	126.46	126.16	126.05	124.68	120.93	
Plastics and synthetics, except glass.....	115.50	114.39	112.74	112.47	112.88	112.32	114.09	113.94	111.76	113.55	110.27	109.33	109.59	109.52	107.07	
Drugs.....	103.07	100.85	100.60	101.18	100.53	99.63	99.54	100.04	99.38	98.98	100.70	100.45	100.85	98.40	94.37	
Soap, cleaners, and toilet goods.....	108.00	107.83	106.86	106.60	108.62	107.68	106.75	107.27	105.41	103.83	104.49	103.86	103.97	103.89	100.46	
Paints, varnishes, and allied products.....	102.82	106.19	105.93	106.71	106.14	105.98	107.84	106.50	108.36	103.48	103.38	102.21	101.71	101.59	97.85	
Agricultural chemicals.....	93.02	94.57	93.26	93.29	94.16	91.10	91.74	92.44	97.83	99.70	91.08	89.68	89.68	88.39	84.38	
Other chemical products.....	110.27	111.14	110.46	109.67	110.20	108.68	109.66	107.94	107.59	105.37	104.45	104.65	105.83	103.76	100.77	
Petroleum refining and related industries.....	133.16	132.57	132.39	131.77	134.20	130.21	133.98	133.25	131.57	133.77	128.61	126.36	130.62	126.88	124.31	
Petroleum refining.....	139.67	139.86	139.44	136.53	139.70	134.39	138.94	138.53	137.03	140.95	134.97	132.68	137.52	131.43	129.24	
Other petroleum and coal products.....	101.91	102.11	105.83	114.04	113.26	115.20	115.26	113.09	110.12	104.83	99.10	97.96	102.25	107.75	102.10	
Rubber and miscellaneous plastic products.....	102.16	105.08	102.91	101.93	102.67	100.86	100.04	100.53	99.23	98.25	100.12	99.88	100.37	100.04	96.15	
Tires and inner tubes.....	134.39	142.28	137.53	134.06	134.97	132.84	130.73	128.88	124.66	126.88	129.36	128.32	129.52	130.47	121.88	
Other rubber products.....	98.66	100.12	98.49	98.81	99.46	96.63	94.40	97.27	96.22	94.40	96.22	96.22	96.29	95.53	91.53	
Miscellaneous plastic products.....	87.94	89.87	88.17	87.98	89.25	88.62	87.76	87.56	87.13	85.24	87.13	86.51	86.72	85.90	83.03	
Leather and leather products.....	69.12	69.45	66.59	67.66	67.13	67.41	66.12	66.70	64.42	62.13	64.58	64.70	65.60	64.67	62.83	
Leather tanning and finishing.....	89.67	94.12	92.57	93.52	91.94	90.23	90.23	93.75	91.76	89.38	88.58	88.26	88.84	87.42	84.35	
Footwear, except rubber.....	68.11	67.34	63.51	64.21	64.03	65.15	64.39	64.50	61.20	59.33	61.88	62.33	63.54	62.66	60.15	
Other leather products.....	65.47	66.47	66.12	67.86	66.09	65.49	63.07	64.09	62.55	60.52	63.04	62.57	62.70	62.58	61.07	
Average weekly hours																
Chemicals and allied products.....	41.6	41.6	41.4	41.4	41.5	41.4	41.6	41.7	41.7	42.0	41.4	41.2	41.3	41.6	41.4	
Industrial chemicals.....	42.3	41.8	41.7	41.6	41.6	41.6	41.8	41.7	41.5	42.2	41.6	41.5	41.6	41.7	41.7	
Plastics and synthetics, except glass.....	42.0	41.9	41.6	41.5	41.5	41.6	42.1	42.2	41.7	41.9	41.3	41.1	41.2	41.8	41.5	
Drugs.....	40.9	40.5	40.4	40.8	40.7	40.5	40.3	40.5	40.4	40.4	41.1	41.0	41.5	41.0	40.5	
Soap, cleaners, and toilet goods.....	40.6	41.0	41.1	41.0	41.3	41.1	40.9	41.1	40.7	40.4	40.5	40.1	40.3	40.9	41.0	
Paints, varnishes, and allied products.....	39.7	41.0	40.9	41.2	41.3	41.4	41.8	41.6	42.0	40.9	40.7	40.4	40.2	40.8	40.6	
Agricultural chemicals.....	41.9	42.6	42.2	42.6	42.8	41.6	41.7	42.6	45.5	48.4	44.0	42.5	42.3	42.7	42.4	
Other chemical products.....	41.3	42.1	42.0	41.7	41.9	41.8	42.3	42.0	41.7	41.0	40.8	41.2	41.5	41.5	41.3	
Petroleum refining and related industries.....	41.1	41.3	41.5	41.7	42.2	41.6	42.4	42.3	41.9	42.2	40.7	40.5	41.6	41.6	41.3	
Petroleum refining.....	41.2	41.5	41.5	41.0	41.7	40.6	41.6	41.4	41.4	42.2	40.9	40.7	41.8	41.2	40.9	
Other petroleum and coal products.....	40.6	40.2	41.5	44.2	43.9	45.0	45.2	44.7	43.7	42.1	39.8	39.5	40.9	43.1	42.9	
Rubber and miscellaneous plastic products.....	40.7	41.7	41.0	41.1	41.4	41.0	40.5	40.7	40.5	40.1	40.7	40.6	40.8	41.0	40.4	
Tires and inner tubes.....	40.6	42.6	41.3	40.5	40.9	40.5	40.1	39.9	39.2	39.9	40.3	40.1	40.1	40.9	39.7	
Other rubber products.....	40.6	41.2	40.7	41.0	41.1	40.6	40.0	40.7	40.6	40.0	40.6	40.6	40.8	41.0	40.5	
Miscellaneous plastic products.....	40.9	41.8	41.2	41.5	41.9	41.8	41.2	41.3	41.1	40.4	41.1	41.0	41.1	41.1	40.7	
Leather and leather products.....	38.4	38.8	37.2	37.8	37.5	38.3	38.0	37.9	36.6	35.5	36.9	37.4	37.1	37.6	37.4	
Leather tanning and finishing.....	39.5	41.1	40.6	41.2	40.5	40.1	40.1	41.3	40.6	39.9	39.9	39.8	40.2	40.1	39.6	
Footwear, except rubber.....	38.7	38.7	36.5	36.9	36.8	38.1	38.1	37.6	36.0	34.9	36.4	37.1	37.6	37.3	36.9	
Other leather products.....	37.2	38.2	38.0	39.0	38.2	38.3	37.1	37.7	36.8	35.6	37.3	37.2	37.1	37.7	37.7	
Average hourly earnings																
Chemicals and allied products.....	\$2.78	\$2.76	\$2.75	\$2.75	\$2.75	\$2.73	\$2.74	\$2.72	\$2.70	\$2.70	\$2.69	\$2.69	\$2.69	\$2.65	\$2.58	
Industrial chemicals.....	3.13	3.12	3.10	3.12	3.10	3.07	3.07	3.06	3.05	3.10	3.04	3.04	3.03	2.99	2.90	
Plastics and synthetics, except glass.....	2.75	2.73	2.71	2.71	2.72	2.70	2.71	2.70	2.68	2.71	2.67	2.66	2.66	2.62	2.58	
Drugs.....	2.52	2.49	2.49	2.48	2.47	2.46	2.47	2.47	2.46	2.45	2.45	2.45	2.43	2.40	2.33	
Soap, cleaners, and toilet goods.....	2.66	2.63	2.60	2.60	2.63	2.62	2.61	2.61	2.59	2.57	2.58	2.59	2.58	2.54	2.45	
Paints, varnishes and allied products.....	2.59	2.59	2.59	2.59	2.57	2.56	2.58	2.56	2.58	2.53	2.54	2.53	2.53	2.49	2.41	
Agricultural chemicals.....	2.22	2.22	2.21	2.19	2.20	2.19	2.20	2.17	2.15	2.06	2.07	2.11	2.12	2.07	1.99	
Other chemical products.....	2.67	2.64	2.63	2.63	2.63	2.60	2.59	2.57	2.58	2.57	2.56	2.54	2.55	2.50	2.44	
Petroleum refining and related industries.....	3.24	3.21	3.19	3.16	3.18	3.13	3.16	3.15	3.14	3.17	3.16	3.12	3.14	3.05	3.01	
Petroleum refining.....	3.39	3.37	3.36	3.33	3.35	3.31	3.34	3.33	3.31	3.34	3.30	3.26	3.29	3.19	3.16	
Other petroleum and coal products.....	2.51	2.54	2.55	2.58	2.58	2.56	2.55	2.53	2.52	2.49	2.49	2.48	2.50	2.50	2.38	
Rubber and miscellaneous plastic products.....	2.51	2.52	2.51	2.48	2.48	2.46	2.47	2.47	2.45	2.45	2.46	2.46	2.46	2.44	2.38	
Tires and inner tubes.....	3.31	3.34	3.33	3.31	3.30	3.28	3.26	3.23	3.18	3.18	3.21	3.20	3.23	3.19	3.07	
Other rubber products.....	2.43	2.43	2.42	2.41	2.42	2.38	2.36	2.39	2.37	2.36	2.37	2.37	2.36	2.33	2.26	
Miscellaneous plastic products.....	2.15	2.15	2.14	2.12	2.13	2.12	2.13	2.12	2.12	2.11	2.12	2.11	2.11	2.09	2.04	
Leather and leather products.....	1.80	1.79	1.79	1.79	1.79	1.76	1.74	1.76	1.76	1.75	1.75	1.73	1.74	1.72	1.68	
Leather tanning and finishing.....	2.27	2.29	2.28	2.27	2.27	2.25	2.25	2.27	2.26	2.24	2.22	2.22	2.21	2.18	2.13	
Footwear, except rubber.....	1.76	1.74	1.74	1.74	1.74	1.71	1.69	1.71	1.70	1.70	1.70	1.68	1.69	1.68	1.63	
Other leather products.....	1.76	1.74	1.74	1.74	1.73	1.71	1.70	1.70	1.70	1.70	1.69	1.69	1.69	1.66	1.62	

See footnotes at end of table.



TABLE C-1. Gross hours and earnings of production workers,<sup>1</sup> by industry—Continued

Revised series; see box, p. 348.

Industry	1964	1963												Annual average	
	Jan. <sup>2</sup>	Dec. <sup>3</sup>	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	Jan.	1962	1961
Average weekly earnings															
Transportation and public utilities:															
Railroad transportation:															
Class I railroads <sup>4</sup>							\$120.18	\$116.48	\$119.46	\$118.25	\$114.96	\$121.67	\$118.25	\$115.87	\$112.94
Local and interurban passenger transit:															
Local and suburban transportation		\$101.68	\$102.41	\$102.48	\$102.30	\$103.28	103.09	103.63	102.48	100.38	99.72	100.32	98.83	100.11	98.24
Intercity and rural buslines		120.93	123.38	126.44	138.70	134.06	133.44	124.27	122.69	123.12	118.29	121.39	123.52	118.40	110.76
Motor freight transportation and storage		119.39	117.29	120.13	120.12	119.71	118.85	118.58	117.31	115.36	114.95	114.39	111.93	113.30	108.58
Pipeline transportation		143.03	139.47	136.49	140.15	134.94	138.65	140.66	137.16	138.45	135.94	138.63	138.58	132.76	131.45
Communication:															
Telephone communication		103.62	106.08	105.04	105.30	102.26	102.36	102.00	101.24	99.94	100.58	101.09	99.94	98.95	93.38
Telegraph communication <sup>4</sup>		112.32	111.90	112.17	112.86	112.71	112.98	113.25	110.30	108.16	107.38	109.05	108.05	107.78	104.33
Radio and television broadcasting		136.32	134.85	137.07	135.93	132.10	132.10	131.66	135.04	131.99	131.98	134.30	127.20	120.12	
Electric, gas, and sanitary services		124.62	123.79	122.96	123.37	121.42	121.13	121.42	119.72	119.31	119.02	119.60	119.19	116.85	112.07
Electric companies and systems		124.94	123.41	123.80	124.01	123.26	124.09	123.55	121.86	120.42	120.13	119.43	120.42	118.24	112.75
Gas companies and systems		117.16	117.16	115.36	116.47	111.93	111.93	112.74	112.20	111.24	112.07	113.44	111.38	108.53	104.19
Combined utility systems		137.57	135.34	134.37	134.92	132.07	130.19	131.14	129.15	129.05	128.45	129.68	128.64	126.59	121.77
Water, steam, and sanitary systems		100.02	100.26	100.14	98.06	97.88	97.64	97.41	95.94	96.70	96.93	98.06	97.23	94.66	92.62
Average weekly hours															
Transportation and public utilities:															
Railroad transportation:							43.7	41.9	43.6	43.0	41.5	43.3	43.0	42.6	42.3
Class I railroads <sup>4</sup>															
Local and interurban passenger transit:															
Local and suburban transportation		41.5	41.8	42.0	42.1	42.5	42.6	43.0	42.7	42.0	41.9	41.8	41.7	42.6	42.9
Intercity and rural buslines		41.7	42.4	43.6	46.7	45.6	45.7	43.3	42.9	42.9	41.8	43.2	43.8	42.9	42.6
Motor freight transportation and storage		41.6	41.3	42.3	42.0	42.3	41.7	42.2	41.6	41.2	41.2	41.0	40.7	41.5	41.6
Pipeline transportation		41.1	40.9	40.5	41.1	40.4	40.9	41.1	40.7	40.6	40.1	40.3	41.0	40.6	40.2
Communication:															
Telephone communication		39.7	40.8	40.4	40.5	40.1	40.3	40.0	39.7	39.5	39.6	39.8	39.5	39.9	39.4
Telegraph communication <sup>4</sup>		41.6	41.6	41.7	41.8	41.9	42.0	42.1	42.1	41.6	41.3	41.4	41.4	42.1	41.9
Radio and television broadcasting		39.4	39.2	39.5	39.4	39.2	39.2	39.2	39.3	39.0	39.4	39.5	39.5	38.9	38.5
Electric, gas, and sanitary services		41.5	41.4	41.4	41.4	41.3	41.2	41.3	41.0	41.0	40.9	41.1	41.1	41.0	40.9
Electric companies and systems		41.1	41.0	41.2	41.2	41.5	41.5	41.6	41.1	41.1	41.0	40.9	41.1	41.2	41.0
Gas companies and systems		41.4	41.4	41.2	41.3	40.7	40.7	40.7	40.8	40.6	40.9	41.1	41.1	40.8	40.7
Combined utility systems		42.2	41.9	41.6	41.9	41.4	41.2	41.5	41.0	41.1	40.9	41.3	41.1	41.1	41.0
Water, steam, and sanitary systems		41.5	41.6	41.9	41.2	41.3	41.2	41.1	41.0	40.8	40.9	41.2	41.2	40.8	40.8
Average hourly earnings															
Transportation and public utilities:															
Railroad transportation:							\$2.75	\$2.78	\$2.74	\$2.75	\$2.77	\$2.81	\$2.75	\$2.72	\$2.67
Class I railroads <sup>4</sup>															
Local and interurban passenger transit:															
Local and suburban transportation		\$2.45	\$2.45	\$2.44	\$2.43	\$2.43	2.42	2.41	2.40	2.39	2.38	2.40	2.37	2.35	2.29
Intercity and rural buslines		2.90	2.91	2.90	2.97	2.94	2.92	2.87	2.86	2.87	2.83	2.81	2.82	2.76	2.60
Motor freight transportation and storage		2.87	2.84	2.84	2.86	2.83	2.85	2.81	2.82	2.80	2.79	2.79	2.75	2.73	2.61
Pipeline transportation		3.48	3.41	3.37	3.41	3.34	3.39	3.42	3.37	3.41	3.39	3.44	3.38	3.27	3.27
Communication:															
Telephone communication		2.61	2.60	2.60	2.60	2.55	2.54	2.55	2.55	2.53	2.54	2.54	2.53	2.48	2.37
Telegraph communication <sup>4</sup>		2.70	2.69	2.69	2.70	2.69	2.69	2.69	2.62	2.60	2.61	2.61	2.60	2.56	2.49
Radio and television broadcasting		3.46	3.44	3.47	3.45	3.37	3.37	3.37	3.35	3.41	3.35	3.34	3.40	3.27	3.12
Electric, gas, and sanitary services		3.01	2.99	2.97	2.98	2.94	2.94	2.94	2.92	2.91	2.91	2.91	2.90	2.85	2.74
Electric companies and systems		3.04	3.01	3.00	3.01	2.97	2.99	2.97	2.96	2.93	2.93	2.92	2.93	2.87	2.75
Gas companies and systems		2.83	2.83	2.80	2.82	2.75	2.75	2.77	2.75	2.74	2.74	2.76	2.71	2.68	2.56
Combined utility systems		3.26	3.23	3.23	3.22	3.19	3.16	3.16	3.15	3.14	3.14	3.14	3.13	3.08	2.97
Water, steam, and sanitary systems		2.41	2.41	2.39	2.38	2.37	2.37	2.37	2.34	2.37	2.37	2.38	2.36	2.32	2.27

See footnotes at end of table.

TABLE C-1. Gross hours and earnings of production workers,<sup>1</sup> by industry—Continued

Revised series; see box, p. 348.

Industry	1964		1963												Annual average	
	Jan. <sup>2</sup>	Dec. <sup>2</sup>	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	Jan.	1962	1961	
	Average weekly earnings															
Wholesale and retail trade <sup>1</sup>		\$77.80	\$77.75	\$77.95	\$78.36	\$78.79	\$78.79	\$78.19	\$77.39	\$76.62	\$76.42	\$76.03	\$76.03	\$75.08	\$72.56	
Wholesale trade		101.43	100.85	100.94	100.69	99.72	99.55	100.12	99.47	98.58	98.58	97.93	97.36	96.22	93.56	
Motor vehicles and automotive equipment		96.79	96.14	96.33	96.33	95.11	94.89	94.66	94.66	94.24	93.15	92.74	92.96	92.82	89.46	
Drugs, chemicals, and allied products		103.17	102.51	102.26	102.36	100.65	100.60	100.65	99.75	99.50	99.75	99.75	98.65	97.84	94.24	
Dry goods and apparel		92.96	92.63	93.99	94.49	92.37	90.86	90.86	90.64	92.38	91.48	91.96	91.10	92.48	92.72	
Groceries and related products		94.69	95.04	93.75	94.43	93.83	94.75	94.47	93.38	92.51	91.65	90.58	90.64	89.86	86.53	
Electrical goods		109.47	106.52	105.04	104.26	103.06	102.40	102.77	101.85	101.71	102.21	102.87	102.56	101.59	97.53	
Hardware, plumbing, and heating goods		96.76	97.03	96.39	97.10	95.82	95.65	96.05	95.65	95.00	93.96	93.50	94.66	92.97	89.91	
Machinery, equipment, and supplies		110.15	109.75	110.97	110.56	108.50	107.68	109.06	108.09	107.16	107.16	106.49	106.34	104.14	101.59	
Retail trade <sup>1</sup>		68.40	68.26	68.25	68.61	69.30	69.30	68.96	67.68	67.48	66.75	66.75	66.93	65.95	64.01	
General merchandise stores		56.32	53.88	54.54	54.86	55.22	55.38	54.79	53.51	53.28	53.01	52.51	53.01	52.59	50.52	
Department stores		59.66	57.94	59.31	59.84	60.03	60.03	59.68	58.31	57.80	57.12	56.45	57.12	57.10	55.04	
Limited price variety stores		40.78	40.00	40.00	40.13	41.50	41.08	40.22	39.48	39.48	39.36	39.16	38.96	38.91	37.28	
Food stores		66.43	66.59	66.43	66.85	67.68	67.68	66.93	65.58	65.26	65.24	64.73	64.91	64.78	63.01	
Grocery, meat, and vegetable stores		67.82	68.16	67.82	68.45	69.14	69.50	68.74	66.82	66.66	66.47	66.12	66.69	66.22	64.44	
Apparel and accessories stores		56.64	54.42	54.08	54.90	55.11	55.77	54.70	54.06	55.36	53.35	53.85	55.20	53.63	51.90	
Men's and boys' apparel stores		68.15	66.79	66.24	67.33	67.82	68.96	67.28	66.06	66.39	64.40	65.15	66.77	65.82	64.67	
Women's ready-to-wear stores		50.90	48.29	48.43	48.38	48.56	49.27	48.76	48.33	49.13	47.52	47.71	48.67	47.46	45.77	
Family clothing stores		54.91	54.01	52.17	53.51	54.62	55.34	54.32	53.40	54.01	52.10	53.44	53.82	52.45	51.91	
Shoe stores		56.74	54.21	55.01	55.53	56.11	56.45	54.15	54.78	58.35	55.26	55.44	56.28	55.61	52.97	
Average weekly hours																
Wholesale and retail trade <sup>1</sup>		38.9	38.3	38.4	38.6	39.2	39.2	38.9	38.5	38.5	38.4	38.4	38.4	38.7	38.8	
Wholesale trade		40.9	40.5	40.7	40.6	40.7	40.8	40.7	40.6	40.4	40.4	40.3	40.4	40.6	40.5	
Motor vehicles and automotive equipment		41.9	41.8	41.7	41.7	41.9	41.8	41.7	41.7	41.7	41.4	41.4	41.5	42.0	42.0	
Drugs, chemicals, and allied products		40.3	40.2	40.1	40.3	40.1	40.4	40.1	39.9	39.8	39.9	39.9	40.1	40.1	40.1	
Dry goods and apparel		38.1	37.5	37.9	38.1	37.7	37.7	37.7	37.3	37.4	37.8	38.0	37.8	37.9	38.0	
Groceries and related products		41.9	41.5	41.3	41.6	41.7	42.3	41.8	41.5	41.3	41.1	40.8	41.2	41.6	41.4	
Electrical goods		41.0	40.5	40.4	40.1	40.1	40.0	40.3	40.1	40.2	40.4	40.5	40.7	40.8	40.3	
Hardware, plumbing, and heating goods		41.0	40.6	40.5	40.8	40.6	40.7	40.7	40.7	40.6	40.5	40.3	40.8	40.6	40.5	
Machinery, equipment, and supplies		41.1	40.8	41.1	41.1	41.1	41.1	41.0	41.1	40.9	40.9	40.8	40.9	41.0	40.8	
Retail trade <sup>1</sup>		38.0	37.3	37.5	37.7	38.5	38.5	38.1	37.6	37.7	37.5	37.5	37.6	37.9	38.1	
General merchandise stores		36.1	34.1	34.3	34.5	35.4	35.5	34.9	34.3	34.6	34.2	34.1	34.2	34.6	34.6	
Department stores		35.3	33.3	33.7	34.0	34.7	34.7	34.3	33.9	34.2	33.8	33.6	33.6	34.4	34.4	
Limited price variety stores		33.7	32.0	32.0	32.1	33.2	33.4	32.7	32.1	32.9	32.0	32.1	32.2	32.7	32.7	
Food stores		34.6	34.5	34.6	35.0	36.0	36.0	35.6	34.7	34.9	34.7	34.8	34.9	35.4	35.8	
Grocery, meat, and vegetable stores		34.6	34.6	34.6	35.1	36.2	36.2	35.8	34.8	34.9	34.8	34.8	35.1	35.6	36.0	
Apparel and accessories stores		35.4	33.8	33.8	34.1	35.1	35.3	34.4	34.0	34.6	34.2	34.3	34.5	34.6	34.6	
Men's and boys' apparel stores		38.5	36.7	36.8	37.2	38.1	38.1	37.8	36.7	37.3	36.8	36.6	37.3	37.4	37.6	
Women's ready-to-wear stores		35.1	33.3	33.4	33.6	34.2	34.7	34.1	33.8	34.6	33.7	33.6	33.8	33.9	33.9	
Family clothing stores		35.2	34.4	34.1	34.3	35.7	35.7	35.5	34.9	35.3	34.5	34.7	34.5	35.2	35.8	
Shoe stores		32.8	31.7	31.8	32.1	33.8	33.8	31.3	31.3	32.6	32.7	33.6	33.5	33.3	32.9	
Average hourly earnings																
Wholesale and retail trade <sup>1</sup>		\$2.00	\$2.03	\$2.03	\$2.03	\$2.01	\$2.01	\$2.01	\$2.01	\$1.99	\$1.99	\$1.98	\$1.98	\$1.94	\$1.87	
Wholesale trade		2.48	2.49	2.48	2.48	2.45	2.44	2.46	2.45	2.44	2.44	2.43	2.41	2.37	2.31	
Motor vehicles and automotive equipment		2.31	2.30	2.31	2.31	2.27	2.27	2.27	2.27	2.26	2.25	2.24	2.24	2.21	2.13	
Drugs, chemicals, and allied products		2.56	2.55	2.55	2.54	2.51	2.49	2.51	2.50	2.50	2.50	2.50	2.46	2.44	2.35	
Dry goods and apparel		2.44	2.47	2.48	2.48	2.45	2.41	2.41	2.43	2.47	2.42	2.42	2.41	2.44	2.44	
Groceries and related products		2.26	2.29	2.27	2.27	2.25	2.24	2.26	2.25	2.24	2.23	2.22	2.20	2.16	2.09	
Electrical goods		2.67	2.63	2.60	2.60	2.57	2.56	2.55	2.54	2.53	2.53	2.54	2.52	2.49	2.42	
Hardware, plumbing, and heating goods		2.36	2.39	2.38	2.38	2.36	2.35	2.36	2.35	2.34	2.32	2.32	2.32	2.29	2.22	
Machinery, equipment, and supplies		2.68	2.69	2.70	2.69	2.64	2.62	2.66	2.63	2.62	2.62	2.61	2.60	2.54	2.49	
Retail trade <sup>1</sup>		1.80	1.83	1.82	1.82	1.80	1.80	1.81	1.80	1.79	1.78	1.78	1.78	1.74	1.68	
General merchandise stores		1.56	1.58	1.59	1.59	1.56	1.56	1.57	1.56	1.54	1.55	1.54	1.55	1.52	1.46	
Department stores		1.69	1.74	1.76	1.76	1.73	1.73	1.74	1.72	1.69	1.69	1.68	1.70	1.66	1.60	
Limited price variety stores		1.21	1.25	1.25	1.25	1.25	1.23	1.23	1.23	1.20	1.23	1.22	1.21	1.19	1.14	
Food stores		1.92	1.93	1.92	1.91	1.88	1.88	1.88	1.89	1.87	1.88	1.86	1.86	1.83	1.76	
Grocery, meat, and vegetable stores		1.96	1.97	1.96	1.95	1.91	1.92	1.92	1.92	1.91	1.91	1.90	1.90	1.86	1.79	
Apparel and accessories stores		1.60	1.61	1.60	1.61	1.57	1.58	1.59	1.59	1.60	1.56	1.57	1.60	1.55	1.50	
Men's and boys' apparel stores		1.77	1.82	1.80	1.81	1.78	1.81	1.78	1.80	1.78	1.75	1.78	1.79	1.76	1.72	
Women's ready-to-wear stores		1.45	1.45	1.45	1.44	1.42	1.42	1.43	1.43	1.42	1.41	1.42	1.44	1.40	1.35	
Family clothing stores		1.56	1.57	1.53	1.56	1.53	1.55	1.53	1.53	1.53	1.51	1.54	1.56	1.49	1.45	
Shoe stores		1.73	1.71	1.73	1.73	1.66	1.67	1.73	1.75	1.79	1.69	1.65	1.68	1.67	1.61	

See footnotes at end of table.

TABLE C-1. Gross hours and earnings of production workers,<sup>1</sup> by industry—Continued

Revised series; see box, p. 348.

Industry	1964			1963											Annual average	
	Jan. <sup>2</sup>	Dec. <sup>2</sup>	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	Jan.	1962	1961	
Average weekly earnings																
Wholesale and retail trade <sup>1</sup> —Continued																
Retail trade <sup>1</sup> —Continued																
Furniture and appliance stores.....		\$87.15	\$84.66	\$83.22	\$83.64	\$84.05	\$82.42	\$82.62	\$81.40	\$80.60	\$80.79	\$80.40	\$82.21	\$80.75	\$77.64	
Other retail trade.....		78.85	79.10	78.69	78.25	79.19	79.19	78.81	78.06	77.64	76.63	76.63	76.63	75.76	73.57	
Motor vehicle dealers.....		96.58	98.76	97.45	93.74	97.90	98.11	98.99	98.33	97.45	94.18	93.30	92.87	93.08	88.44	
Other vehicle and accessory dealers.....		83.73	82.16	82.16	82.78	83.10	84.23	82.65	82.16	81.22	80.85	81.10	82.21	80.08	78.32	
Drug stores.....		60.02	59.53	58.32	59.29	60.54	60.59	60.10	58.08	58.44	58.08	57.88	58.24	57.41	55.80	
Finance, insurance, and real estate:																
Banking.....		75.92	75.35	74.07	75.14	74.40	74.77	74.40	74.40	74.23	74.23	74.40	74.23	71.80	69.38	
Security dealers and exchanges.....		127.34	128.13	126.92	121.55	115.80	118.84	123.77	124.19	119.06	116.34	119.10	117.26	116.95	133.37	
Insurance carriers.....		97.67	96.86	96.79	96.72	96.66	96.65	96.13	95.57	95.44	95.71	95.69	95.38	93.46	89.75	
Life insurance.....		103.38	102.14	102.14	102.15	102.57	102.45	101.21	100.25	100.23	100.83	100.64	100.98	99.08	95.12	
Accident and health insurance.....		83.37	82.69	82.92	82.56	81.84	81.86	82.06	81.97	81.36	81.18	81.58	81.82	78.33	74.39	
Fire, marine, and casualty insurance.....		92.89	92.66	92.40	92.18	91.55	91.64	92.20	92.07	91.80	91.70	91.79	90.51	88.61	85.08	
Services and miscellaneous:																
Hotels and lodging places:																
Hotels, tourist courts, and motels <sup>1</sup> .....		47.60	47.72	48.09	48.22	48.31	47.96	47.36	47.86	46.08	46.85	47.23	46.85	46.14	45.14	
Personal services:																
Laundries, cleaning and dyeing plants.....		51.99	51.99	51.87	52.00	51.48	52.00	52.67	52.54	52.40	50.95	50.04	50.69	50.57	49.28	
Motion pictures:																
Motion picture filming and distributing.....		134.54	133.25	139.96	132.89	132.65	130.01	128.89	121.25	124.33	123.98	125.52	125.74	122.27	120.50	
Average weekly hours																
Wholesale and retail trade <sup>1</sup> —Continued																
Retail trade <sup>1</sup> —Continued																
Furniture and appliance stores.....		41.5	40.7	40.4	40.6	41.0	40.8	40.9	40.7	40.5	40.6	40.4	40.7	41.2	41.3	
Other retail trade.....		41.5	41.2	41.2	41.4	41.9	41.9	41.7	41.3	41.3	41.2	41.2	41.2	41.4	41.8	
Motor vehicle dealers.....		43.7	43.7	43.7	43.4	43.9	43.8	43.8	43.7	43.7	43.6	43.6	43.6	43.7	44.0	
Other vehicle and accessory dealers.....		44.3	43.7	43.7	43.8	44.2	44.1	44.2	43.7	43.9	43.7	43.6	44.2	44.0	44.5	
Drug stores.....		36.6	36.3	36.0	36.6	37.6	37.4	37.1	36.3	36.3	36.3	36.4	36.4	36.8	37.2	
Finance, insurance, and real estate:																
Banking.....		37.4	37.3	37.3	37.2	37.2	37.2	37.2	37.2	37.3	37.3	37.2	37.3	37.2	37.1	
Security dealers and exchanges.....																
Insurance carriers.....																
Life insurance.....																
Accident and health insurance.....																
Fire, marine, and casualty insurance.....																
Services and miscellaneous:																
Hotels and lodging places:																
Hotels, tourist courts, and motels <sup>1</sup> .....		38.7	38.8	39.1	39.2	40.6	40.3	38.5	38.6	38.4	38.4	38.4	38.4	39.1	39.0	
Personal services:																
Laundries, cleaning and dyeing plants.....		38.8	38.8	39.0	39.1	39.0	39.1	39.6	39.5	39.4	38.6	38.2	38.4	38.9	38.8	
Motion pictures:																
Motion picture filming and distributing.....																
Average hourly earnings																
Wholesale and retail trade <sup>1</sup> —Continued																
Retail trade <sup>1</sup> —Continued																
Furniture and appliance stores.....		\$2.10	\$2.08	\$2.06	\$2.06	\$2.05	\$2.02	\$2.02	\$2.00	\$1.99	\$1.99	\$1.99	\$2.02	\$1.96	\$1.88	
Other retail trade.....		1.90	1.92	1.91	1.89	1.89	1.89	1.89	1.89	1.88	1.86	1.86	1.86	1.83	1.76	
Motor vehicle dealers.....		2.21	2.26	2.23	2.16	2.23	2.24	2.26	2.25	2.23	2.16	2.14	2.13	2.13	2.01	
Other vehicle and accessory dealers.....		1.89	1.88	1.88	1.89	1.88	1.91	1.87	1.88	1.85	1.85	1.86	1.86	1.82	1.76	
Drug stores.....		1.64	1.64	1.62	1.62	1.61	1.62	1.62	1.60	1.61	1.60	1.59	1.60	1.56	1.50	
Finance, insurance, and real estate:																
Banking.....		2.03	2.02	2.01	2.02	2.00	2.01	2.00	2.00	1.99	1.99	2.00	1.99	1.93	1.87	
Security dealers and exchanges.....																
Insurance carriers.....																
Life insurance.....																
Accident and health insurance.....																
Fire, marine, and casualty insurance.....																
Services and miscellaneous:																
Hotels and lodging places:																
Hotels, tourist courts, and motels <sup>1</sup> .....		1.23	1.23	1.23	1.23	1.19	1.19	1.23	1.24	1.20	1.22	1.23	1.22	1.18	1.14	
Personal services:																
Laundries, cleaning and dyeing plants.....		1.34	1.34	1.33	1.33	1.32	1.33	1.33	1.33	1.33	1.32	1.31	1.32	1.30	1.27	
Motion pictures:																
Motion picture filming and distributing.....																

<sup>1</sup> For comparability of data with those published in issues prior to October 1963, see footnote 1, table A-2. For employees covered, see footnote 1, table A-3. <sup>2</sup> Preliminary.

<sup>3</sup> Based upon monthly data summarized in the M-300 report by the Interstate Commerce Commission, which relate to all employees who received pay during the month, except executives, officials, and staff assistants (ICC Group I).

<sup>4</sup> Data relate to nonsupervisory employees except messengers.

<sup>5</sup> Excludes eating and drinking places.

<sup>6</sup> Money payments only, additional value of board, room, uniforms, and tips not included.

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics for all series except that for Class 1 railroads. (See footnote 3.)



TABLE C-2. Average weekly hours, seasonally adjusted, of production workers in selected industries<sup>1</sup>  
Revised series; see box, p. 348.

Industry division and group	1964	1963											
	Jan. <sup>2</sup>	Dec. <sup>2</sup>	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	Jan.
Mining.....	41.1	41.5	41.4	41.8	41.8	41.5	40.9	42.2	41.9	41.6	41.0	41.5	41.3
Contract construction.....	35.6	36.7	36.9	37.6	37.3	37.2	37.3	37.6	37.5	37.5	37.3	36.1	37.0
Manufacturing.....	40.4	40.6	40.5	40.6	40.7	40.3	40.4	40.5	40.5	40.1	40.5	40.3	40.4
Durable goods.....	41.1	41.5	41.1	41.2	41.3	41.0	41.2	41.3	41.1	40.7	41.0	41.0	40.9
Ordinance and accessories.....	40.7	40.9	40.6	41.2	41.4	41.3	41.0	41.4	40.9	40.4	40.7	41.4	41.2
Lumber and wood products, except furniture.....	39.7	40.7	40.1	40.3	40.2	40.0	40.4	40.1	39.5	39.9	39.9	40.1	39.9
Furniture and fixtures.....	40.6	41.1	41.0	40.7	40.7	40.9	41.2	40.9	40.9	40.5	40.7	40.9	40.8
Stone, clay, and glass products.....	40.4	40.9	41.3	41.6	41.3	41.2	41.4	41.5	41.6	41.3	41.4	40.9	40.8
Primary metal industries.....	41.1	41.0	40.9	40.6	40.7	40.9	41.1	41.7	41.8	41.3	40.6	40.6	40.3
Fabricated metal products.....	41.5	41.7	41.5	41.6	41.4	41.1	41.2	41.2	41.4	40.9	41.2	41.3	41.3
Machinery.....	42.4	42.5	42.1	41.9	42.1	41.7	41.7	41.7	41.5	41.2	41.6	41.7	41.7
Electrical equipment and supplies.....	40.1	40.4	40.2	40.3	40.3	40.3	40.6	40.4	40.4	40.1	40.3	40.4	40.3
Transportation equipment.....	42.8	42.6	42.3	42.3	42.0	41.5	42.1	42.2	41.9	41.4	41.8	41.9	42.5
Instruments and related products.....	40.7	40.7	40.7	41.0	41.1	40.7	40.8	40.7	40.8	40.5	41.0	41.1	40.6
Miscellaneous manufacturing industries.....	39.7	39.6	39.4	39.7	39.8	39.8	39.7	39.5	39.6	39.2	39.6	39.8	39.6
Nondurable goods.....	39.3	39.6	39.5	39.8	39.7	39.6	39.5	39.6	39.7	39.3	39.8	39.7	39.6
Food and kindred products.....	40.8	41.0	40.9	41.0	40.9	41.0	40.8	41.0	40.8	40.7	41.1	40.9	40.8
Tobacco manufactures.....	38.8	38.3	39.2	38.1	37.2	39.9	39.4	39.7	39.0	35.6	39.2	37.6	39.2
Textile mill products.....	40.2	41.0	40.8	41.0	40.7	40.5	40.4	40.5	40.6	40.2	40.7	40.3	40.2
Apparel and related products.....	34.9	36.0	35.7	36.4	36.6	35.9	36.0	36.0	36.4	35.9	36.5	36.3	36.3
Paper and allied products.....	42.6	42.9	42.8	43.0	42.8	42.7	42.7	42.7	42.6	42.2	42.8	42.7	42.7
Printing, publishing, and allied industries.....	38.3	38.5	38.1	38.4	38.4	38.4	38.3	38.3	38.4	38.3	38.4	38.4	38.2
Chemicals and allied products.....	41.7	41.6	41.4	41.5	41.5	41.4	41.6	41.4	41.6	41.8	41.6	41.4	41.4
Petroleum refining and related industries.....	41.2	41.8	41.5	41.6	41.5	41.6	41.7	41.9	41.9	42.3	41.3	41.3	41.7
Rubber and miscellaneous plastic products.....	40.9	41.5	40.9	41.0	41.2	40.8	40.2	40.1	40.4	40.7	41.1	41.1	41.0
Leather and leather products.....	37.5	38.1	37.4	38.9	38.3	37.8	37.0	37.3	37.3	36.8	36.9	37.1	36.8
Wholesale and retail trade <sup>3</sup> .....	38.7	38.6	38.5	38.6	38.7	38.7	38.7	38.7	38.7	38.7	38.6	38.7	38.6
Wholesale trade.....	40.7	40.5	40.6	40.5	40.5	40.5	40.6	40.6	40.6	40.5	40.6	40.6	40.5
Retail trade <sup>3</sup> .....	37.8	37.7	37.8	37.7	37.8	37.8	37.9	37.9	37.8	37.9	37.8	37.8	37.8

<sup>1</sup> For employees covered, see footnote 1, table A-3.

<sup>2</sup> Preliminary.

<sup>3</sup> Excludes eating and drinking places.

NOTE: The seasonal adjustment method used is described in "New Seasonal Adjustment Factors for Labor Force Components," *Monthly Labor Review*, August 1960, pp. 822-827.

TABLE C-3. Average hourly earnings excluding overtime of production workers in manufacturing, by major industry group<sup>1</sup>  
Revised series; see box, p. 348.

Major industry group	1964	1963												Annual average	
	Jan. <sup>2</sup>	Dec. <sup>2</sup>	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	Jan.	1962	1961
Manufacturing.....	\$2.43	\$2.41	\$2.40	\$2.38	\$2.38	\$2.35	\$2.37	\$2.37	\$2.37	\$2.36	\$2.35	\$2.35	\$2.31	\$2.25	
Durable goods.....	2.60	2.58	2.57	2.55	2.55	2.52	2.54	2.54	2.54	2.53	2.52	2.52	2.48	2.42	
Ordinance and accessories.....	2.88	2.88	2.88	2.85	2.84	2.82	2.82	2.79	2.80	2.80	2.82	2.81	2.80	2.75	2.71
Lumber and wood products, except furniture.....	2.01	2.00	2.01	2.03	1.99	1.95	1.93	1.94	1.91	1.90	1.89	1.90	1.91	1.88	
Furniture and fixtures.....	1.94	1.94	1.94	1.94	1.92	1.92	1.92	1.92	1.91	1.91	1.91	1.91	1.91	1.88	
Stone, clay, and glass products.....	2.40	2.39	2.39	2.39	2.37	2.37	2.37	2.37	2.35	2.36	2.36	2.35	2.36	2.31	2.25
Primary metal industries.....	2.96	2.95	2.94	2.94	2.94	2.96	2.96	2.96	2.95	2.98	2.93	2.92	2.91	2.90	2.84
Fabricated metal products.....	2.55	2.54	2.52	2.52	2.51	2.51	2.51	2.52	2.51	2.50	2.50	2.49	2.47	2.41	
Machinery.....	2.72	2.71	2.70	2.69	2.67	2.67	2.67	2.67	2.67	2.66	2.66	2.66	2.65	2.61	2.54
Electrical equipment and supplies.....	2.44	2.42	2.41	2.40	2.39	2.40	2.40	2.40	2.40	2.39	2.39	2.38	2.34	2.29	
Transportation equipment.....	2.94	2.95	2.93	2.92	2.87	2.88	2.87	2.86	2.86	2.86	2.86	2.86	2.86	2.80	2.72
Instruments and related products.....	2.43	2.43	2.42	2.42	2.42	2.41	2.42	2.41	2.41	2.41	2.41	2.41	2.39	2.37	2.32
Miscellaneous manufacturing industries.....	2.01	1.98	1.97	1.96	1.95	1.97	1.97	1.96	1.98	1.97	1.98	1.98	1.93	1.87	
Nondurable goods.....	2.21	2.19	2.17	2.16	2.16	2.13	2.15	2.14	2.14	2.13	2.13	2.13	2.09	2.05	
Food and kindred products.....	2.26	2.24	2.20	2.20	2.18	2.21	2.22	2.22	2.23	2.22	2.22	2.21	2.15	2.09	
Tobacco manufactures.....	1.88	1.85	1.78	1.77	1.80	1.99	1.99	2.00	1.97	1.94	1.90	1.88	1.83	1.75	
Textile mill products.....	1.69	1.68	1.65	1.65	1.64	1.64	1.64	1.63	1.64	1.64	1.64	1.64	1.62	1.58	
Apparel and related products.....	1.74	1.73	1.74	1.73	1.69	1.67	1.66	1.65	1.66	1.65	1.65	1.67	1.65	1.62	
Paper and allied products.....	2.39	2.38	2.37	2.37	2.36	2.36	2.35	2.34	2.34	2.33	2.32	2.33	2.29	2.22	
Printing, publishing, and allied industries.....	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	
Chemicals and allied products.....	2.69	2.67	2.67	2.66	2.65	2.66	2.64	2.62	2.60	2.61	2.62	2.62	2.57	2.51	
Petroleum refining and related industries.....	3.13	3.11	3.07	3.08	3.04	3.05	3.05	3.04	3.08	3.09	3.06	3.07	2.97	2.94	
Rubber and miscellaneous plastic products.....	2.43	2.41	2.38	2.38	2.37	2.38	2.39	2.38	2.38	2.38	2.38	2.38	2.35	2.30	
Leather and leather products.....	1.75	1.76	1.75	1.75	1.72	1.71	1.73	1.73	1.73	1.72	1.70	1.71	1.69	1.65	

<sup>1</sup> For comparability of data with those published in issues prior to October 1963, see footnote 1, table A-2. For employees covered, see footnote 1, table A-3. Average hourly earnings excluding overtime are derived by assuming that overtime hours are paid for at the rate of time and one-half.

<sup>2</sup> Preliminary.

<sup>3</sup> Not available because average overtime rates are significantly above time and one-half. Inclusion of data for the group in the nondurable goods total has little effect.

TABLE C-4. Average overtime hours of production workers in manufacturing, by industry<sup>1</sup>

Revised series; see box, p. 348.

Industry	1964	1963												Annual average	
	Jan. <sup>2</sup>	Dec. <sup>2</sup>	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	Jan.	1962	1961
Manufacturing.....	2.7	3.1	3.0	3.0	3.1	2.9	2.9	3.0	2.8	2.4	2.6	2.5	2.5	2.8	2.4
Durable goods.....	2.9	3.3	3.2	3.2	3.2	3.0	2.9	3.2	2.9	2.5	2.7	2.6	2.6	2.8	2.3
Nondurable goods.....	2.4	2.8	2.8	2.9	3.0	2.8	2.8	2.8	2.6	2.4	2.6	2.5	2.4	2.7	2.5
Durable goods															
Ordinance and accessories.....		2.4	2.2	2.5	2.6	2.7	2.4	2.4	2.2	1.6	2.1	2.5	2.6	2.2	1.8
Ammunition, except for small arms.....		2.7	2.6	2.9	2.7	2.8	2.8	2.7	2.1	1.6	1.9	2.4	2.4	1.9	1.6
Sighting and fire control equipment.....		1.7	1.2	1.1	2.3	2.0	.5	.7	.9	1.2	2.1	2.2	2.9	3.0	2.2
Other ordinance and accessories.....		2.2	1.8	2.2	2.5	2.6	2.1	2.4	2.6	1.6	2.4	2.6	2.9	2.5	2.1
Lumber and wood products, except furniture.....		3.2	3.3	3.6	3.8	4.0	3.7	3.9	3.2	2.9	3.0	2.9	2.8	3.2	2.9
Sawmills and planing mills.....		3.2	3.3	3.5	3.6	3.9	3.8	3.9	3.2	3.0	3.0	2.9	2.9	3.1	2.9
Millwork, plywood, and related products.....		3.6	3.6	3.5	3.9	4.2	4.0	3.9	3.5	3.1	3.2	3.0	2.8	3.3	2.8
Wooden containers.....		2.6	2.6	3.0	3.2	3.7	4.2	3.5	3.5	2.8	2.6	2.2	1.9	2.9	2.5
Miscellaneous wood products.....		2.7	3.0	3.1	3.3	3.2	2.7	3.1	3.1	2.6	2.9	2.7	2.5	2.9	2.6
Furniture and fixtures.....		3.8	3.4	3.5	3.7	3.5	2.9	2.9	2.5	2.2	2.6	2.5	2.5	2.9	2.4
Household furniture.....		4.2	3.6	3.7	3.8	3.4	2.9	2.9	2.6	2.4	2.9	2.7	2.7	3.0	2.4
Office furniture.....		2.2	1.9	2.6	2.8	2.7	2.3	2.9	1.8	1.3	1.8	1.9	1.9	2.1	2.0
Partitions; office and store fixtures.....		2.0	2.2	2.7	3.2	3.4	3.1	2.3	1.8	1.2	1.3	1.7	1.9	3.0	2.4
Other furniture and fixtures.....		3.5	3.2	3.0	3.9	4.1	3.0	2.8	2.5	1.9	2.1	2.0	2.1	2.6	2.6
Stone, clay, and glass products.....		3.3	3.8	4.1	4.0	4.0	4.0	4.0	3.9	3.4	3.1	2.8	2.8	3.4	3.2
Flat glass.....		2.7	4.5	3.2	2.6	1.9	2.2	2.7	1.9	1.6	1.3	1.5	1.5	1.7	2.1
Glass and glassware, pressed or blown.....		3.1	3.2	3.5	3.4	3.5	3.4	3.5	3.6	3.3	3.3	3.3	3.3	3.5	3.6
Cement, hydraulic.....		1.8	1.8	2.0	2.2	2.2	2.4	2.3	2.1	2.3	2.0	1.7	1.6	1.8	1.5
Structural clay products.....		2.9	3.4	3.5	3.3	3.4	3.6	3.5	3.4	2.8	2.6	2.5	2.4	2.8	2.7
Pottery and related products.....		1.8	2.2	2.2	2.4	2.0	2.0	1.9	2.0	1.6	1.8	1.6	1.7	1.8	1.5
Concrete, gypsum, and plaster products.....		4.4	5.6	6.6	6.2	6.5	6.4	6.5	6.2	5.6	4.5	3.7	3.5	5.4	5.0
Other stone and mineral products.....		3.0	3.0	3.4	3.4	3.2	3.0	3.1	3.0	2.5	2.8	2.6	2.4	2.7	2.3
Primary metal industries.....		2.8	2.5	2.4	2.7	2.4	2.7	3.3	3.1	2.8	2.5	2.4	2.3	2.3	1.9
Blast furnace and basic steel products.....		1.4	1.2	1.2	1.8	1.5	2.1	2.7	2.8	2.8	1.8	1.5	1.3	1.4	1.3
Iron and steel foundries.....		4.7	4.2	3.8	3.8	3.5	3.3	4.3	3.9	3.1	3.5	3.6	3.1	2.9	2.1
Nonferrous smelting and refining.....		2.8	2.7	3.1	3.4	3.2	2.9	2.9	2.9	2.9	2.9	2.8	2.8	2.7	2.5
Nonferrous rolling, drawing and extruding.....		4.3	3.9	3.7	3.8	3.8	3.7	4.3	3.7	2.5	3.4	3.3	3.5	3.6	3.1
Nonferrous foundries.....		3.3	3.1	3.1	2.9	2.8	2.8	3.0	2.8	2.7	3.1	3.0	3.2	2.9	2.3
Miscellaneous primary metal industries.....		3.8	3.5	3.5	3.8	2.9	3.3	3.3	3.3	2.7	3.0	3.0	3.4	3.2	2.4
Fabricated metal products.....		3.2	3.2	3.4	3.5	3.3	3.1	3.3	3.0	2.4	2.7	2.6	2.7	2.9	2.4
Metal cans.....		3.1	3.4	2.9	4.1	5.1	4.1	4.2	3.3	3.1	2.3	2.5	2.7	3.5	3.2
Outfitter, hand tools, and general hardware.....		3.5	3.5	2.9	2.8	2.4	2.1	2.8	3.0	2.0	2.6	2.5	2.8	2.5	2.1
Heating equipment and plumbing fixtures.....		2.1	2.2	2.6	2.4	2.4	2.3	2.5	2.0	1.3	1.7	1.8	1.9	1.9	1.5
Fabricated structural metal products.....		2.7	2.8	3.1	3.5	3.4	3.3	3.1	2.7	2.0	2.2	2.1	2.0	2.5	2.3
Screw machine products, bolts, etc.....		3.6	3.4	3.5	4.0	3.6	3.4	3.9	3.8	3.1	3.5	3.9	4.0	4.0	2.6
Metal stampings.....		4.3	4.1	4.5	4.2	3.5	3.6	3.9	3.7	3.0	3.3	3.2	3.4	3.5	2.9
Coating, engraving, and allied services.....		3.7	3.8	4.1	4.2	3.6	3.3	3.6	3.3	2.6	3.1	2.8	3.2	3.3	2.8
Miscellaneous fabricated wire products.....		3.2	3.3	3.3	3.3	3.2	2.8	2.9	2.8	2.2	2.8	2.8	2.9	3.0	2.7
Miscellaneous fabricated metal products.....		2.6	2.5	2.8	3.0	2.6	2.4	2.5	2.7	2.2	2.6	2.3	2.4	2.6	2.3
Machinery.....		3.8	3.4	3.2	3.3	3.2	3.2	3.4	3.1	2.8	3.2	3.0	2.9	3.1	2.5
Engines and turbines.....		3.5	2.7	2.0	3.0	2.1	2.4	2.6	2.2	1.8	2.7	2.6	2.0	2.2	1.8
Farm machinery and equipment.....		2.6	1.8	2.1	2.2	1.9	2.1	2.1	2.1	2.2	2.6	2.5	2.0	2.1	1.6
Construction and related machinery.....		3.2	3.0	2.8	3.0	3.0	2.8	3.1	2.7	2.2	2.4	2.3	2.2	2.6	1.9
Metalworking machinery and equipment.....		5.5	5.0	4.6	4.4	4.6	4.9	5.2	4.9	4.6	5.1	4.7	4.4	4.7	3.4
Special industry machinery.....		4.3	3.6	3.4	3.6	3.3	3.5	3.7	3.4	3.1	3.5	3.5	3.5	3.5	2.8
General industrial machinery.....		3.5	3.1	3.1	3.3	3.0	2.9	2.9	2.4	2.0	2.4	2.3	2.2	2.8	2.0
Office, computing, and accounting machines.....		1.9	2.2	2.1	2.2	1.8	1.5	1.7	1.6	1.3	1.7	1.5	1.3	1.5	2.2
Service industry machines.....		2.0	1.8	1.8	2.2	2.5	2.2	2.5	2.3	1.7	2.3	1.8	1.6	2.0	1.6
Miscellaneous machinery.....		4.5	4.3	4.3	4.0	4.0	4.0	4.4	4.2	3.5	4.1	3.9	4.1	4.1	3.5
Electrical equipment and supplies.....		2.3	2.1	2.2	2.3	2.1	2.0	2.2	1.9	1.5	1.9	2.0	1.9	2.2	1.9
Electric distribution equipment.....		2.8	2.4	2.4	2.7	2.5	2.1	2.4	1.9	1.5	1.8	1.8	1.5	2.0	1.8
Electrical industrial apparatus.....		2.7	2.4	2.4	2.7	2.3	2.5	2.4	2.3	1.9	2.2	2.4	2.1	2.2	1.9
Household appliances.....		2.1	2.1	2.2	2.6	2.4	2.7	2.7	2.0	1.5	2.2	1.6	1.3	1.9	1.9
Electric lighting and wiring equipment.....		2.4	2.2	2.1	2.5	2.1	2.0	2.1	1.9	1.5	1.7	1.6	1.7	1.8	1.6
Radio and TV receiving sets.....		1.4	1.6	2.1	2.1	2.0	2.0	2.0	1.7	1.8	1.4	1.4	1.1	1.9	1.6
Communication equipment.....		2.1	1.8	1.8	2.0	1.8	1.5	1.8	1.6	1.3	1.9	2.1	2.2	2.5	2.2
Electronic components and accessories.....		2.0	2.1	2.0	1.9	1.7	1.7	1.8	1.8	1.6	1.9	1.9	1.7	2.0	1.9
Miscellaneous electrical equipment and supplies.....		3.6	2.8	3.0	2.5	1.9	2.2	3.0	2.4	1.6	1.8	2.7	3.4	3.2	2.2
Transportation equipment.....		4.7	4.5	4.2	3.7	3.1	3.3	3.7	3.5	2.7	3.1	3.1	3.3	3.5	2.5
Motor vehicles and equipment.....		6.5	6.1	5.4	4.2	3.5	4.0	4.5	4.3	3.3	3.7	3.3	3.8	4.1	2.6
Aircraft and parts.....		2.7	2.6	2.8	2.9	2.6	2.5	2.5	2.2	1.9	2.3	2.7	2.9	2.9	2.5
Ship and boat building and repairing.....		3.0	3.5	3.2	3.6	2.5	2.4	3.3	3.5	2.8	2.9	3.4	3.1	2.8	2.6
Railroad equipment.....		2.2	2.0	1.8	2.4	2.0	2.5	2.3	1.9	2.0	2.3	1.6	1.6	2.0	.9
Other transportation equipment.....		2.7	2.5	3.2	4.0	3.2	3.8	3.7	3.5	2.7	2.8	2.6	1.8	2.5	1.8
Instruments and related products.....		2.5	2.5	2.7	2.7	2.3	2.2	2.4	2.3	1.9	2.3	2.2	2.2	2.4	2.1
Engineering and scientific instruments.....		3.5	2.9	2.6	2.8	2.3	2.1	2.5	2.2	1.8	2.5	2.4	2.8	2.6	2.2
Mechanical measuring and control devices.....		2.2	2.7	2.7	2.6	2.5	2.5	2.5	2.3	1.9	2.1	1.9	1.9	2.2	1.9
Optical and ophthalmic goods.....		2.7	2.5	2.8	2.7	2.1	2.3	2.5	2.4	2.1	2.5	2.3	2.0	2.2	2.0
Surgical, medical, and dental equipment.....		2.0	2.1	2.1	2.3	2.1	1.9	2.4	2.0	1.6	2.1	1.9	1.6	2.3	2.1
Photographic equipment and supplies.....		2.7	2.9	3.2	3.1	2.0	2.4	2.4	2.8	2.3	2.9	3.2	3.1	2.9	2.9
Watches and clocks.....		2.0	1.7	2.2	2.3	2.2	1.9	1.9	1.9	1.4	1.7	1.7	1.5	1.9	1.5

See footnotes at end of table.

TABLE C-4. Average overtime hours of production workers in manufacturing, by industry<sup>1</sup>—Continued  
Revised series; see box, p. 348.

Industry	1964		1963											Annual average	
	Jan. <sup>2</sup>	Dec. <sup>2</sup>	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	Jan.	1962	1961
<b>Manufacturing—Continued</b>															
<i>Durable goods—Continued</i>															
Miscellaneous manufacturing industries.....	2.5	2.5	2.7	2.6	2.2	1.9	2.1	2.0	1.9	2.2	2.1	2.0	2.3	2.2	
Jewelry, silverware, and plated ware.....	4.6	4.1	4.0	3.4	2.7	2.4	2.7	2.8	2.4	2.7	2.6	2.5	3.0	3.0	
Toys, amusement and sporting goods.....	1.6	2.0	2.4	2.3	2.1	1.6	1.6	1.6	1.5	1.7	1.7	1.7	1.9	1.9	
Pens, pencils, office and art materials.....	3.0	2.0	2.5	2.6	2.2	1.8	2.1	1.7	1.4	1.8	2.0	1.9	2.0	1.8	
Costume jewelry, buttons, and notions.....	2.7	2.5	2.8	2.6	2.2	2.0	2.4	2.1	2.0	2.3	2.3	1.7	2.2	1.9	
Other manufacturing industries.....	2.4	2.6	2.7	2.6	2.1	2.0	2.3	2.2	2.0	2.3	2.5	2.3	2.3	2.5	2.3
<i>Nondurable goods</i>															
Food and kindred products.....	3.5	3.5	3.5	3.8	3.5	3.8	3.7	3.4	2.9	3.1	3.0	3.1	3.4	3.3	
Meat products.....	4.8	4.9	4.0	4.5	3.5	3.8	3.9	3.6	2.9	3.2	2.9	3.3	3.6	3.7	
Dairy products.....	2.7	2.5	2.7	3.2	3.2	3.6	3.5	3.3	3.2	3.2	3.0	3.1	3.4	3.1	
Canned and preserved food, except meats.....	2.0	1.7	2.4	3.2	2.8	2.5	2.3	2.3	1.9	2.3	2.2	2.2	2.6	2.4	
Grain mill products.....	5.3	6.2	7.5	7.2	6.6	7.5	6.9	6.3	4.7	5.4	5.6	5.8	6.3	6.2	
Bakery products.....	3.0	2.9	3.0	3.3	3.2	3.5	3.4	3.2	2.9	2.8	2.7	2.5	3.1	2.9	
Sugar.....	3.0	3.3	4.4	3.9	3.5	3.8	3.5	4.4	3.9	3.3	3.1	3.1	3.7	4.3	
Confectionery and related products.....	2.6	2.7	2.9	3.4	2.5	2.1	2.6	1.8	1.7	2.3	2.3	2.3	2.5	2.5	
Beverages.....	2.5	2.9	3.1	3.3	3.6	4.4	4.1	3.2	2.9	2.8	2.3	2.3	2.8	2.7	
Miscellaneous food and kindred products.....	4.3	4.2	4.1	4.0	4.1	4.0	3.8	3.8	3.4	3.6	4.0	3.8	3.9	3.9	
Tobacco manufactures.....	1.4	1.4	1.1	1.4	1.4	1.4	1.5	1.0	.3	.8	.7	.6	1.0	1.1	
Cigarettes.....	1.2	1.6	.8	1.6	1.9	1.8	2.0	1.3	.4	1.0	.5	.5	.9	1.2	
Cigars.....	1.5	1.7	1.8	1.4	1.3	1.1	1.2	.9	1.1	.8	1.1	.7	.9	1.0	
Textile mill products.....	3.5	3.7	3.6	3.3	3.3	3.1	3.4	3.2	2.8	3.1	3.0	2.8	3.2	2.7	
Cotton broad woven fabrics.....	4.0	4.3	4.0	3.4	3.4	2.9	3.1	3.2	3.0	3.0	2.9	3.0	3.2	2.7	
Silk and synthetic broad woven fabrics.....	5.0	5.2	4.7	4.4	4.3	3.9	4.4	4.4	3.7	3.9	3.9	4.0	4.3	3.2	
Weaving and finishing broad woollens.....	3.1	2.4	2.9	3.4	3.3	3.8	4.0	3.7	3.0	3.6	3.7	3.4	4.2	3.3	
Narrow fabrics and smallwares.....	3.2	3.4	3.3	2.7	2.7	3.2	3.1	3.4	2.9	3.0	3.0	3.3	3.3	2.9	
Knitting.....	1.8	2.2	2.4	2.3	2.4	2.4	2.4	2.0	1.6	1.8	1.7	1.6	2.2	2.0	
Finishing textiles, except wool and knit.....	4.8	4.7	4.3	3.9	3.7	3.3	4.5	4.1	3.8	4.6	4.2	3.1	4.2	3.7	
Floor covering.....	4.7	5.0	5.1	5.4	4.5	4.1	4.2	3.5	3.6	4.8	4.9	3.3	4.1	3.3	
Yarn and thread.....	3.2	3.6	3.4	3.0	3.1	3.1	3.5	3.2	2.9	3.1	2.8	2.5	3.2	2.7	
Miscellaneous textile goods.....	3.8	3.9	4.0	3.3	3.7	3.5	4.2	3.3	2.8	3.3	3.4	3.2	3.5	2.9	
Apparel and related products.....	1.2	1.3	1.4	1.4	1.5	1.3	1.3	1.1	1.4	1.3	1.0	1.3	1.0	1.1	
Men's and boys' suits and coats.....	.9	.9	1.0	1.0	1.1	.8	1.0	1.1	.9	1.3	1.3	1.1	1.2	.8	
Men's and boys' furnishings.....	1.0	.9	1.0	1.3	1.5	1.3	1.3	1.2	.9	1.1	1.0	.9	1.2	.9	
Women's, misses', and juniors' outerwear.....	1.1	1.1	1.3	1.3	1.4	1.4	1.3	1.4	1.4	1.8	1.5	1.1	1.4	1.1	
Women's and children's undergarments.....	1.4	1.8	2.0	2.0	1.6	1.4	1.2	1.3	1.0	1.4	1.1	.9	1.3	1.4	
Hats, caps, and millinery.....	1.1	1.0	1.4	1.6	1.6	1.4	1.0	1.2	1.0	2.0	1.7	1.1	1.5	1.5	
Girls' and children's outerwear.....	1.0	1.1	1.2	1.2	1.5	1.5	1.5	1.3	.7	1.2	1.2	.8	1.2	1.3	
Fur goods and miscellaneous apparel.....	1.2	1.6	1.6	1.2	1.2	1.0	.9	1.0	.7	.9	.8	.8	1.2	1.2	
Miscellaneous fabricated textile products.....	2.2	2.1	2.1	2.2	1.9	1.5	1.8	1.8	1.5	1.5	1.4	1.3	1.7	1.6	
Paper and allied products.....	4.4	4.6	4.8	5.0	4.8	4.8	4.6	4.3	3.8	4.3	4.1	4.1	4.4	4.2	
Paper and pulp.....	5.2	5.5	5.5	5.8	5.6	5.9	5.4	5.3	4.8	5.4	5.2	5.3	5.2	5.0	
Paperboard.....	5.9	5.9	6.2	6.3	6.4	6.8	6.3	5.5	5.0	5.9	5.6	5.4	5.9	5.6	
Converted paper and paperboard products.....	3.6	3.3	3.4	3.8	3.6	3.2	3.2	2.9	2.6	2.9	2.9	2.9	3.0	3.0	
Paperboard containers and boxes.....	3.7	3.9	4.4	4.5	4.1	3.8	4.1	3.6	3.1	3.3	3.2	3.2	3.9	3.7	
Printing, publishing, and allied industries.....	3.2	2.7	2.9	3.1	2.8	2.6	2.7	2.8	2.4	2.8	2.5	2.4	2.8	2.7	
Newspaper publishing and printing.....	3.2	2.4	2.6	2.4	2.2	2.3	2.6	2.7	2.0	2.0	1.8	1.7	2.5	2.4	
Periodical publishing and printing.....	3.1	3.7	4.1	3.9	3.3	3.3	2.8	2.7	3.0	4.0	3.2	2.2	3.1	3.1	
Books.....	3.6	2.7	3.3	4.4	4.5	3.9	3.5	3.9	3.1	3.6	2.8	2.6	3.4	3.7	
Commercial printing.....	3.3	2.9	3.1	3.5	2.9	2.7	2.8	2.9	2.7	3.2	2.8	2.7	3.0	2.9	
Bookbinding and related industries.....	2.6	2.4	2.3	2.4	2.1	2.1	2.4	2.2	2.1	2.2	1.8	2.2	2.4	2.1	
Other publishing and printing industries.....	2.9	2.4	2.5	2.9	2.9	2.4	2.4	2.1	1.9	2.5	2.7	2.4	2.6	2.5	
Chemicals and allied products.....	2.4	2.4	2.5	2.6	2.5	2.6	2.6	2.6	3.1	2.5	2.4	2.2	2.5	2.3	
Industrial chemicals.....	2.4	2.4	2.5	2.4	2.6	2.6	2.5	2.2	2.8	2.3	2.4	2.2	2.5	2.3	
Plastics and synthetics, except glass.....	2.3	2.1	2.2	2.3	2.3	2.5	2.7	2.1	2.6	2.0	2.0	1.9	2.3	2.0	
Drugs.....	2.0	2.0	2.2	1.9	1.8	2.2	2.2	2.0	2.0	2.6	2.5	2.4	2.4	1.9	
Soap, cleaners, and toilet goods.....	2.7	2.5	2.7	3.0	2.7	2.8	2.4	2.1	2.2	2.4	2.5	2.3	2.7	2.6	
Paints, varnishes, and allied products.....	1.8	1.9	2.4	2.4	2.6	2.9	2.8	3.1	2.0	2.0	1.7	1.5	2.1	1.9	
Agricultural chemicals.....	3.7	3.5	3.8	3.8	2.9	3.0	3.6	6.8	9.6	5.6	3.7	3.3	4.1	3.8	
Other chemical products.....	2.7	2.8	2.8	3.0	3.1	2.9	2.8	2.6	2.2	2.4	2.5	2.6	2.6	2.6	
Petroleum refining and related industries.....	2.1	2.3	2.5	2.7	2.4	2.9	2.7	2.6	2.5	1.7	1.6	2.0	2.3	2.0	
Petroleum refining.....	1.9	1.9	1.7	2.0	1.4	2.0	1.9	1.9	2.1	1.5	1.4	1.7	1.6	1.5	
Other petroleum and coal products.....	3.0	3.6	5.4	5.2	6.1	6.2	5.6	5.1	4.0	2.5	2.6	3.1	4.8	4.4	
Rubber and miscellaneous plastic products.....	3.4	3.2	3.3	3.5	3.2	2.9	2.9	2.5	2.4	2.9	2.9	2.8	3.1	2.6	
Tires and inner tubes.....	4.3	3.7	3.5	3.7	3.3	3.2	2.8	2.1	2.3	2.8	2.9	2.8	3.3	2.7	
Other rubber products.....	2.8	2.8	2.9	3.0	2.5	2.3	2.6	2.3	2.2	2.5	2.6	2.6	2.9	2.4	
Miscellaneous plastic products.....	3.5	3.3	3.5	3.8	3.8	3.5	3.3	3.1	2.5	3.4	3.2	3.0	3.2	2.9	
Leather and leather products.....	1.7	1.4	1.7	1.6	1.7	1.3	1.4	1.1	.9	1.3	1.5	1.2	1.4	1.4	
Leather tanning and finishing.....	3.0	2.9	3.2	3.0	2.7	2.6	3.2	2.8	2.4	2.4	2.5	2.4	2.6	2.3	
Footwear, except rubber.....	1.5	1.1	1.2	1.3	1.5	1.2	1.2	.9	.7	1.2	1.3	1.1	1.1	1.1	
Other leather products.....	1.9	1.8	2.4	1.9	2.0	1.3	1.4	1.0	.9	1.4	1.7	1.2	1.8	1.7	

<sup>1</sup> For comparability of data with those published in issues prior to October 1963, see footnote 1, table A-2. For employees covered, see footnote 1, table A-3.

These series cover premium overtime hours of production and related workers during the pay period ending nearest the 15th of the month. Overtime hours are those paid for at premium rates because (1) they exceeded

either the straight-time workday or workweek or (2) they occurred on week-ends or holidays or outside regularly scheduled hours. Hours for which only shift differential, hazard, incentive, or other similar types of premiums were paid are excluded.

<sup>2</sup> Preliminary.



TABLE C-5. Indexes of aggregate weekly man-hours and payrolls in industrial and construction activities<sup>1</sup>

[1957-59=100]

Revised series; see box p. 348.

Activity	1964		1963												Annual average	
	Jan. <sup>2</sup>	Dec. <sup>2</sup>	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	Jan.	1962	1961	
	Man-hours															
Total.....	96.2	101.3	103.0	106.5	106.7	105.4	103.9	104.4	101.6	98.0	95.8	94.1	95.1	99.8	95.7	
Mining.....	77.5	81.3	81.7	83.8	84.3	84.7	82.6	86.7	84.2	81.3	77.4	78.2	78.8	83.6	85.6	
Contract construction.....	80.5	95.5	107.8	121.8	121.7	125.6	121.9	116.1	107.6	97.4	83.3	76.5	82.6	99.3	96.1	
Manufacturing.....	100.0	103.4	103.2	104.9	105.0	102.8	101.7	103.1	101.3	99.0	99.0	98.1	98.2	100.6	96.1	
Durable goods.....	102.4	105.1	104.5	105.3	104.9	101.1	102.4	104.7	103.1	100.5	99.6	98.9	99.2	100.3	94.1	
Ordnance and accessories.....	147.7	149.8	148.5	150.8	150.2	147.6	146.5	148.8	147.8	144.8	149.6	151.8	153.4	150.3	133.4	
Lumber and wood products, except furniture.....	87.7	93.1	94.6	98.9	100.4	99.2	95.6	95.3	94.9	90.2	87.8	87.1	87.8	93.3	91.2	
Furniture and fixtures.....	104.3	111.6	110.2	111.6	111.6	110.8	105.3	106.0	102.6	101.8	102.7	102.4	102.9	104.8	97.7	
Stone, clay, and glass products.....	94.9	100.9	106.4	108.5	109.1	110.6	109.8	109.3	106.4	101.4	94.9	91.2	92.1	100.3	97.7	
Primary metal industries.....	98.6	98.3	95.6	95.2	97.2	97.3	101.0	105.2	102.3	100.2	95.8	94.0	92.1	95.3	91.7	
Fabricated metal products.....	104.7	107.0	106.7	108.1	107.9	104.7	102.7	105.7	103.4	99.8	98.9	98.5	99.4	100.6	94.8	
Machinery.....	108.0	108.2	104.4	104.3	104.4	102.4	102.3	104.9	103.8	103.0	103.5	102.7	102.4	101.9	94.4	
Electrical equipment and supplies.....	113.3	116.4	115.6	117.1	116.8	113.5	112.6	115.5	113.7	111.8	113.4	114.5	115.0	115.8	105.9	
Transportation equipment.....	98.2	100.8	99.2	98.2	94.3	80.3	92.4	95.0	94.7	92.2	92.2	92.0	93.7	88.7	80.8	
Instruments and related products.....	105.3	107.8	108.0	108.1	108.2	106.9	105.4	106.9	104.7	103.5	104.2	103.8	103.3	103.2	99.4	
Miscellaneous manufacturing industries.....	96.4	101.9	109.4	112.1	111.2	107.8	99.9	102.6	100.7	97.2	97.2	95.0	92.4	102.1	98.0	
Nondurable goods.....	96.9	101.1	101.6	104.4	105.1	104.9	100.8	101.0	99.0	97.0	98.3	97.0	97.0	101.1	98.7	
Food and kindred products.....	86.9	91.7	94.8	101.8	105.8	104.2	97.5	93.4	88.7	85.5	86.4	85.1	87.6	95.3	96.5	
Tobacco manufactures.....	92.1	100.1	103.4	113.5	114.7	107.7	74.6	78.4	76.5	70.9	78.3	82.0	90.5	93.2	94.6	
Textile mill products.....	92.4	96.8	97.9	98.1	96.3	96.6	94.4	97.1	95.5	93.5	94.4	93.4	92.8	97.4	94.8	
Apparel and related products.....	101.4	108.3	109.0	112.4	112.2	114.1	107.7	108.5	108.9	105.9	110.9	108.2	103.2	106.9	100.2	
Paper and allied products.....	104.8	107.6	107.4	108.6	109.1	108.9	106.7	107.8	105.1	103.3	104.5	103.3	104.1	105.5	103.6	
Printing, publishing, and allied industries.....	104.1	107.9	105.1	105.8	105.9	104.8	103.5	104.4	104.1	102.9	102.3	100.8	100.8	104.7	104.0	
Chemicals and allied products.....	104.1	104.6	104.3	105.0	105.4	105.3	105.2	105.9	106.4	107.7	103.9	102.3	102.2	103.5	100.5	
Petroleum refining and related industries.....	77.0	78.8	80.8	82.6	84.5	84.6	85.5	84.9	83.4	83.0	78.9	78.4	80.4	86.1	88.5	
Rubber and miscellaneous plastic products.....	112.1	116.1	114.9	114.5	114.6	111.9	109.2	114.3	112.9	111.3	112.4	111.8	114.3	113.4	102.3	
Leather and leather products.....	96.0	98.2	94.1	95.6	95.4	99.1	96.3	96.2	90.2	87.3	93.6	95.6	95.7	98.1	96.7	
Payrolls																
Mining.....	-----	91.1	90.5	92.8	94.0	93.1	90.2	95.9	92.1	89.2	85.0	86.2	86.5	90.5	90.6	
Contract construction.....	-----	119.9	131.5	149.7	149.5	152.2	146.8	138.9	128.3	115.5	100.2	92.4	99.9	116.4	108.8	
Manufacturing.....	-----	119.1	122.5	121.5	122.6	122.6	118.2	118.1	119.9	117.4	114.4	114.1	112.6	112.8	105.4	

<sup>1</sup> For comparability of data with those published in issues prior to October 1963, see footnote 1, table A-2.

For mining and manufacturing, data refer to production and related

workers and for contract construction, to construction workers, as defined in footnote 1, table A-3.

<sup>2</sup> Preliminary.

TABLE C-6. Gross and spendable average weekly earnings of production workers in manufacturing<sup>1</sup>[In current and 1957-59 dollars]<sup>1</sup>

Revised series; see box p. 348.

Item	1963												1962	Annual average	
	Dec. <sup>3</sup>	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	Jan.	Dec.	1962	1961
Manufacturing															
Gross average weekly earnings:															
Current dollars .....	\$102.66	\$100.85	\$100.53	\$100.53	\$98.42	\$99.23	\$100.37	\$99.23	\$97.36	\$98.09	\$97.20	\$97.44	\$98.01	\$96.56	\$92.34
1957-59 dollars .....	95.41	93.90	93.78	93.87	91.90	92.65	94.16	93.44	91.68	92.36	91.61	91.92	92.64	91.61	88.62
Spendable average weekly earnings:															
Worker with no dependents:															
Current dollars .....	82.14	80.75	80.51	80.51	78.89	79.51	80.38	79.51	78.04	78.63	77.92	78.11	79.02	77.86	74.60
1957-59 dollars .....	76.34	75.19	75.10	75.17	73.66	74.24	75.40	74.87	73.48	74.04	73.44	73.69	74.69	73.87	71.59
Worker with 3 dependents:															
Current dollars .....	90.06	88.58	88.31	88.31	86.58	87.25	88.18	87.25	85.72	86.31	85.58	85.78	86.72	85.53	82.18
1957-59 dollars .....	83.70	82.48	82.38	82.46	80.84	81.47	82.72	82.16	80.72	81.27	80.66	80.92	81.97	81.15	78.87

<sup>1</sup> For comparability of data with those published in issues prior to October 1963, see footnote 1, table A-2. For employees covered, see footnote 1, table A-3.

Spendable average weekly earnings are based on gross average weekly earnings as published in table C-1 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 com-

puted for 2 types of income receivers: (1) A worker with no dependents, and (2) a 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.

<sup>2</sup> Preliminary.

NOTE: These series are described in "The Calculation and Uses of the Spendable Earnings Series," *Monthly Labor Review*, January 1959, pp. 50-54.

## D.—Consumer and Wholesale Prices

Table D-1. Consumer Price Index<sup>1</sup>—U.S. city average for urban wage earners and clerical workers (including single workers) all items, groups, subgroups, and special groups of items  
[1957-59=100 unless otherwise specified]

Group	1964 January		1963												Annual average	
	Old series	New series <sup>2</sup>	Dec.	Nov.	Oct.	Sep.	Aug.	July	June	May	Apr.	Mar.	Feb.	Jan.	1963	1962
All items.....	107.6	107.7	107.6	107.4	107.2	107.1	107.1	107.1	106.6	106.2	106.2	106.2	106.1	106.0	106.7	105.4
All items (1947-49=100).....	132.0	132.1	132.0	131.8	131.5	131.4	131.4	131.4	130.8	130.3	130.3	130.3	130.2	130.1	131.0	129.3
Food.....	105.7	105.8	105.4	105.1	104.9	105.4	106.0	106.2	105.0	104.2	104.3	104.6	105.0	104.7	105.1	103.6
Food at home.....	104.0	104.2	103.7	103.4	103.2	103.8	104.5	104.8	103.4	102.5	102.6	103.0	103.5	103.2	103.5	102.2
Cereals and bakery products.....	109.1	109.1	109.0	109.1	109.1	109.1	109.1	109.2	109.2	109.2	109.2	109.1	109.2	108.7	109.1	107.6
Meats, poultry, and fish.....	98.2	98.5	99.2	99.7	100.4	101.5	101.4	100.2	98.4	98.0	98.3	100.7	102.1	102.5	100.2	101.7
Dairy products.....	105.0	105.0	105.0	104.8	104.6	104.3	104.2	103.3	102.8	102.8	102.9	103.5	103.6	103.8	103.8	104.1
Fruits and vegetables.....	110.7	113.4	109.8	103.2	106.3	108.1	114.2	118.7	115.6	113.9	112.0	109.6	109.4	106.4	111.0	105.0
Other foods at home <sup>3</sup> .....	102.2	101.8	100.2	99.5	99.6	99.5	98.0	97.8	96.9	94.5	96.2	96.7	97.1	97.6	97.8	96.1
Food away from home.....	114.4	114.5	114.3	114.0	114.0	113.6	113.3	113.1	113.0	112.9	112.8	112.6	112.5	112.3	113.2	110.7
Housing.....	106.9	106.9	106.9	106.6	106.3	106.2	106.0	106.0	105.9	105.7	105.8	105.7	105.4	105.4	106.0	104.8
Shelter <sup>4</sup> .....	108.1	108.0	107.7	107.3	107.1	107.1	107.0	107.0	106.8	106.7	106.8	106.5	106.2	106.2	106.9	105.6
Rent.....	107.3	107.3	107.3	107.2	107.1	107.0	106.8	106.7	106.7	106.6	106.6	106.5	106.4	106.3	106.8	105.7
Homeownership <sup>5</sup> .....	108.5	108.4	108.0	107.4	107.2	107.1	107.1	106.8	106.7	106.6	106.9	106.5	106.1	106.1	107.0	105.6
Fuel and utilities <sup>6</sup> .....	107.7	107.6	107.5	107.3	107.0	106.4	106.7	106.7	106.4	106.9	107.2	106.8	106.9	106.9	107.0	106.1
Fuel oil and coal <sup>7</sup> .....	106.6	106.6	105.8	105.4	104.5	103.7	102.6	102.3	102.1	102.4	104.2	104.8	104.8	104.9	104.0	102.1
Gas and electricity.....	108.4	108.1	108.1	108.0	108.1	108.0	107.2	108.1	108.1	107.4	107.5	108.0	108.0	108.2	107.9	107.9
Household furnishings and operation <sup>8</sup> .....	102.7	102.7	102.9	102.7	102.6	102.7	102.5	102.4	102.4	102.3	102.3	102.3	102.1	101.8	102.4	101.5
Housefurnishings.....	98.4	98.8	98.8	98.7	98.6	98.6	98.3	98.5	98.5	98.4	98.5	98.6	98.3	97.9	98.5	98.9
Household operation.....	110.9	110.9	110.7	110.5	110.7	110.6	110.6	110.2	110.0	109.9	109.7	109.3	109.3	110.2	107.4	107.4
Apparel and upkeep <sup>9</sup> .....	105.0	105.0	106.1	105.9	105.9	105.4	104.7	104.5	104.5	104.3	104.4	104.2	104.0	103.7	104.8	103.6
Apparel.....	104.3	105.5	105.6	105.4	104.8	104.0	103.9	103.9	103.7	103.8	103.6	103.3	103.0	102.4	103.2	103.2
Men's and boys'.....	105.7	105.2	106.2	106.1	105.7	105.2	104.7	104.5	104.4	104.2	104.1	103.9	103.7	103.5	104.7	103.3
Women's and girls'.....	101.0	101.4	103.3	103.5	103.5	102.5	101.2	101.2	101.2	101.1	101.4	101.1	100.7	100.2	101.7	100.9
Footwear.....	111.0	110.9	111.2	111.1	110.9	110.7	110.6	110.5	110.6	110.3	110.2	110.0	109.9	109.8	110.5	109.3
Other apparel <sup>10</sup> .....	101.3	102.1	102.0	101.8	101.4	101.1	101.1	101.1	100.9	100.9	100.9	101.1	100.9	100.3	101.2	100.6
Transportation.....	108.9	109.4	108.9	109.1	109.0	107.9	108.3	107.8	107.4	107.4	107.0	107.0	106.8	106.6	107.8	107.2
Private.....	107.5	108.0	107.5	107.8	107.7	106.5	106.9	106.4	106.1	106.0	105.5	105.6	105.3	105.3	106.4	105.9
Public.....	118.5	118.5	118.3	117.6	117.6	117.1	117.1	116.6	116.6	116.5	116.5	116.4	116.3	115.7	116.9	115.4
Health and recreation.....	112.7	112.7	112.7	112.4	112.3	112.1	111.9	111.7	111.4	110.7	110.7	110.2	110.1	110.1	111.4	109.4
Medical care <sup>11</sup> .....	118.2	118.2	117.9	117.9	117.7	117.5	117.4	117.3	117.2	116.7	116.4	116.1	115.9	115.8	117.0	114.2
Personal care.....	109.1	108.5	108.8	108.4	108.4	108.2	108.0	108.0	107.8	107.8	107.6	107.3	107.3	107.4	107.9	106.5
Reading and recreation.....	113.0	113.1	113.1	112.8	112.7	112.3	112.1	111.5	110.9	111.0	111.0	110.1	110.0	110.2	111.5	109.6
Other goods and services <sup>12</sup> .....	108.3	108.3	108.3	108.3	108.2	108.0	108.0	108.0	107.6	106.0	105.8	105.7	105.7	105.7	107.1	105.3
Special groups:																
All items less shelter.....	107.5	107.6	107.5	107.4	107.2	107.1	107.2	107.1	106.6	106.1	106.1	106.1	106.1	105.9	106.7	105.4
All items less food.....	108.4	108.4	108.5	108.4	108.1	107.8	107.6	107.5	107.3	107.0	107.0	106.8	106.6	106.5	107.4	106.1
Commodities <sup>13</sup> .....	104.9	104.9	104.7	104.5	104.4	104.4	104.6	104.6	104.0	103.5	103.6	103.6	103.6	103.4	104.1	103.2
Nondurables <sup>14</sup> .....	105.6	105.7	105.6	105.4	105.2	105.3	105.5	105.5	104.8	104.2	104.2	104.4	104.5	104.3	104.9	103.6
Nondurables less food.....	105.6	105.6	105.9	105.8	105.6	105.2	105.0	104.8	104.5	104.2	104.3	104.2	104.1	104.0	104.8	103.8
Apparel commodities.....	104.1	104.2	105.4	105.4	105.3	104.6	103.8	103.7	103.7	103.5	103.6	103.4	103.2	102.8	104.0	103.0
Apparel less footwear.....	102.8	102.8	104.2	104.3	104.2	103.4	102.5	102.4	102.4	102.2	102.3	102.1	101.8	101.5	102.8	101.8
Nondurables less food and apparel.....	106.5	106.5	106.2	106.0	105.8	105.5	105.7	105.5	105.0	104.7	104.7	104.7	104.6	104.7	105.3	104.2
Durables <sup>15</sup> .....	102.1	102.3	103.0	103.1	102.7	102.2	102.1	102.1	102.0	101.8	101.8	101.5	101.2	101.2	102.1	101.8
New cars.....	102.1	102.3	102.1	103.2	102.1	99.8	100.2	100.5	101.2	101.1	101.1	101.4	101.7	102.1	101.5	102.1
Used cars.....	117.4	119.6	120.3	121.0	120.0	120.1	119.0	118.1	117.7	115.7	115.4	113.3	110.7	108.2	116.6	115.2
Household durables <sup>16</sup> .....	98.6	98.7	98.9	98.8	98.7	98.6	98.5	98.5	98.4	98.3	98.4	98.5	98.4	98.5	98.5	98.8
Commodities less food <sup>17</sup> .....	104.3	104.3	104.5	104.5	104.2	103.7	103.6	103.5	103.3	103.0	103.1	102.9	102.7	102.6	103.5	102.8
Services <sup>18</sup> .....	114.2	114.1	113.9	113.7	113.5	113.3	113.1	112.9	112.6	112.5	112.3	112.1	112.0	112.0	113.0	110.9
Services less rent <sup>19</sup> .....	116.0	115.8	115.5	115.3	115.1	114.8	114.6	114.4	114.0	114.0	113.7	113.4	113.4	113.4	114.5	112.1
Household services (Dec. 1963=100).....	100.1	100.1	100.1	100.1	100.1	100.1	100.1	100.1	100.1	100.1	100.1	100.1	100.1	100.1	100.1	100.1
Transportation services.....	114.0	114.1	113.7	113.3	113.1	112.9	112.7	112.4	112.3	112.2	112.0	111.8	111.4	111.1	112.4	111.2
Medical care services <sup>12</sup> .....	121.6	121.7	121.3	121.3	121.1	120.9	120.8	120.6	120.5	119.9	119.6	119.3	119.1	118.9	120.3	116.8
Other services <sup>19</sup> (Dec. 1963=100).....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

<sup>1</sup> The CPI measures the average change in prices of goods and services purchased by urban wage-earner and clerical-worker families.

<sup>2</sup> Beginning January 1964, the Consumer Price Index structure has been revised to reflect buying patterns of wage earners and clerical workers in the 1960's. The "new series" indexes shown here are based on expenditures of all urban wage-earner and clerical-worker consumers, including single workers living alone, as well as families of two or more persons. Separate indexes for families only (excluding single persons) for the U.S. city average are available on request. The "old series" indexes will be discontinued after June 1964.

<sup>3</sup> Includes eggs, fats and oils, sugar and sweets, nonalcoholic beverages, and prepared and partially prepared foods.

<sup>4</sup> Also includes hotel and motel room rates not shown separately.

<sup>5</sup> Includes home purchase, mortgage interest, taxes, insurance, and maintenance and repairs.

<sup>6</sup> Also includes telephone, water, and sewerage service not shown separately.

<sup>7</sup> Called "Solid and petroleum fuels" prior to 1964.

<sup>8</sup> Includes housefurnishings and housekeeping supplies and services, but excludes telephone, water, and laundry and dry cleaning of apparel, included under household operation in the old series.

<sup>9</sup> Includes dry cleaning and laundry of apparel, formerly included in household operation.

<sup>10</sup> Includes infants' wear, sewing materials, jewelry, and miscellaneous apparel. Not shown separately in the new series.

<sup>11</sup> Corrected indexes for January through December 1963.

<sup>12</sup> Includes tobacco, alcoholic beverages, and funeral, legal, and bank service charges.

<sup>13</sup> Recalculated group—indexes prior to January 1964 have been recomputed.

<sup>14</sup> Includes foods, paint, furnace filters, shrubbery, fuel oil, coal, household textiles, housekeeping supplies, apparel, gasoline and motor oil, drugs and pharmaceuticals, toilet goods, nondurable recreational goods, newspapers, magazines, books, tobacco, and alcoholic beverages.

<sup>15</sup> Includes home purchase, which was classified under services prior to 1964, building materials, furniture and bedding, floor coverings, household appliances, dinnerware, tableware, cleaning equipment, power tools, lamps, venetian blinds, hardware, automobiles, tires, radios, television sets, tape recorders, durable toys, and sports equipment.

<sup>16</sup> Called "Durable less cars" prior to 1964. Does not include auto parts, durable toys, and sports equipment.

<sup>17</sup> Excludes home purchase costs which were classified under this heading prior to 1964.

<sup>18</sup> Includes rent, mortgage interest, taxes and insurance on real property, home maintenance and repair services, gas, electricity, telephone, water, sewerage service, household help, postage, laundry and dry cleaning, furniture and apparel repair and upkeep, moving, auto repairs, auto insurance, registration and license fees, parking and garage rent, local transit, taxicabs, airplane, train, and bus fares, professional medical services, hospital services, health insurance, barber and beauty shop services, movies, fees for sports, television repairs, and funeral, bank, and legal services.

<sup>19</sup> Includes the services components of apparel, personal care, reading and recreation, and other goods and services. Not comparable with series published prior to 1964.

TABLE D-2. Consumer Price Index—U.S. city average and selected cities for urban wage earners and clerical workers (including single workers) <sup>1</sup>

[1957-59=100 unless otherwise specified]

City <sup>2</sup>	1964 January		1963												Annual Average		January 1964 (1947-49= 100)	
	Old series	New series	Dec.	Nov.	Oct.	Sep.	Aug.	July	June	May	April	Mar.	Feb.	Jan.	1962	1961	Old series	New series
All Items																		
U.S. city average <sup>3</sup> .....	107.6	107.7	107.6	107.4	107.2	107.1	107.1	107.1	106.6	106.2	106.2	106.2	106.1	106.0	105.4	104.2	132.0	132.1
Atlanta, Ga.....	(4)	(4)	105.8	(4)	(4)	105.2	(4)	(4)	104.9	(4)	(4)	104.9	(4)	(4)	104.1	103.2	(4)	(4)
Baltimore, Md.....	(4)	(4)	107.5	(4)	(4)	107.1	(4)	(4)	106.8	(4)	(4)	106.2	(4)	(4)	105.2	104.4	(4)	(4)
Boston, Mass.....	110.0	110.1	(4)	(4)	110.0	(4)	(4)	109.8	(4)	(4)	109.2	(4)	(4)	108.6	107.4	105.1	136.3	136.4
Buffalo, N.Y. (Nov. 1963=100).....	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)
Chicago, Ill.—Northwestern Ind. <sup>4</sup> .....	105.9	105.8	106.1	105.8	106.0	106.0	106.0	106.3	105.5	105.3	105.4	105.5	105.1	105.1	104.6	103.6	133.5	133.4
Cincinnati, Ohio-Kentucky.....	(4)	(4)	105.1	(4)	(4)	105.1	(4)	(4)	104.6	(4)	(4)	104.5	(4)	(4)	103.6	102.6	(4)	(4)
Cleveland, Ohio.....	(4)	(4)	(4)	105.0	(4)	(4)	105.1	(4)	(4)	104.3	(4)	(4)	104.3	(4)	103.5	103.2	(4)	(4)
Dallas, Tex. (Nov. 1963=100).....	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)
Detroit, Mich.....	104.0	103.7	103.6	103.7	103.5	103.3	104.4	103.9	103.5	102.4	102.1	102.6	102.6	102.5	102.2	101.9	128.2	127.9
Honolulu, Hawaii (Dec. 1963=100).....	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)
Houston, Tex.....	(4)	(4)	(4)	106.7	(4)	(4)	106.2	(4)	(4)	104.4	(4)	(4)	105.0	(4)	104.6	102.6	(4)	(4)
Kansas City, Mo.—Kansas.....	108.5	(4)	(4)	108.7	(4)	(4)	107.1	(4)	(4)	106.4	(4)	(4)	105.9	(4)	106.1	104.5	134.2	(4)
Los Angeles-Long Beach, Calif.....	109.4	109.6	108.7	109.3	109.1	108.6	108.4	108.0	107.4	107.6	108.0	107.7	107.8	107.3	106.6	105.4	136.4	136.7
Minneapolis-St. Paul, Minn.....	107.5	(4)	(4)	107.4	(4)	(4)	107.7	(4)	(4)	106.5	(4)	(4)	106.0	(4)	105.5	104.2	133.0	(4)
New York, N.Y.—Northeastern N.J.....	109.6	109.7	109.9	109.4	109.3	109.3	109.2	108.7	107.8	107.9	107.6	107.6	107.5	106.4	104.8	132.1	132.2	132.3
Philadelphia, Pa.—N.J.....	108.4	108.6	108.5	108.3	108.2	107.6	107.5	107.4	107.2	106.2	106.4	106.4	106.2	105.9	105.2	104.4	133.1	133.4
Pittsburgh, Pa.....	107.4	107.7	(4)	107.4	(4)	(4)	107.9	(4)	(4)	106.3	(4)	(4)	106.5	105.9	105.0	103.2	132.3	132.7
Portland, Oreg.—Wash.....	107.6	(4)	(4)	107.1	(4)	(4)	106.8	(4)	(4)	106.2	(4)	(4)	105.7	104.6	104.1	133.3	(4)	(4)
St. Louis, Mo.—Ill.....	(4)	(4)	107.3	(4)	(4)	106.5	(4)	(4)	105.6	(4)	(4)	105.8	(4)	(4)	105.1	103.9	(4)	(4)
San Francisco-Oakland, Calif.....	(4)	(4)	109.9	(4)	(4)	109.2	(4)	(4)	108.9	(4)	(4)	108.4	(4)	(4)	107.4	105.8	(4)	(4)
Scranton, Pa.....	(4)	(4)	(4)	107.9	(4)	(4)	107.6	(4)	(4)	106.7	(4)	(4)	106.9	(4)	105.9	104.1	(4)	(4)
Seattle, Wash.....	(4)	(4)	(4)	109.3	(4)	(4)	109.1	(4)	(4)	107.4	(4)	(4)	107.2	(4)	106.5	104.9	(4)	(4)
Washington, D.C.—Md.—Va.....	(4)	(4)	(4)	107.1	(4)	(4)	106.8	(4)	(4)	106.1	(4)	(4)	105.6	(4)	104.6	103.7	(4)	(4)
Food																		
U.S. city average <sup>3</sup> .....	105.7	105.8	105.4	105.1	104.9	105.4	106.0	106.2	105.0	104.2	104.3	104.6	105.0	104.7	103.6	102.6	-----	-----
Atlanta, Ga.....	104.9	104.4	103.8	103.7	104.0	104.1	104.8	105.0	103.7	102.3	102.7	103.8	104.2	104.0	103.0	101.8	-----	-----
Baltimore, Md.....	108.0	105.8	105.7	104.4	104.7	105.4	105.7	106.0	104.8	103.5	103.7	103.9	104.6	103.3	102.4	-----	-----	-----
Boston, Mass.....	108.4	108.6	108.4	108.0	108.1	108.1	109.0	108.6	106.6	106.2	106.6	106.5	106.3	106.4	104.6	102.4	-----	-----
Buffalo, N.Y. (Nov. 1963=100).....	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	-----	-----
Chicago, Ill.—Northwestern Ind.....	105.7	105.8	105.2	105.4	105.8	106.1	107.6	107.5	105.9	104.7	105.0	105.7	105.4	105.6	105.3	103.2	-----	-----
Cincinnati, Ohio-Kentucky.....	102.9	102.7	102.5	102.6	102.6	103.2	103.7	103.5	102.9	102.3	102.2	102.6	103.7	103.1	101.9	101.8	-----	-----
Cleveland, Ohio.....	101.7	102.3	101.9	101.6	101.7	102.2	103.6	102.6	101.6	100.7	100.8	101.7	102.2	101.7	101.0	100.9	-----	-----
Dallas, Tex. (Nov. 1963=100).....	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	-----	-----
Detroit, Mich.....	101.3	101.4	100.8	100.9	100.7	101.3	103.0	103.4	102.0	100.7	100.8	101.1	101.7	101.3	101.1	101.4	-----	-----
Honolulu, Hawaii (Dec. 1963=100).....	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	-----	-----
Houston, Tex.....	105.6	105.5	105.0	104.8	105.3	104.7	104.6	103.1	102.0	101.8	102.3	103.0	103.2	102.9	101.3	-----	-----	-----
Kansas City, Mo.—Kansas.....	105.9	105.3	105.2	105.1	105.0	105.2	105.1	103.9	102.1	103.3	103.6	104.3	103.2	103.3	101.9	-----	-----	-----
Los Angeles-Long Beach, Calif.....	108.1	108.1	107.8	107.6	107.5	107.0	107.7	106.3	105.9	106.6	106.8	107.8	106.8	106.5	105.5	104.5	-----	-----
Minneapolis-St. Paul, Minn.....	104.0	104.0	103.4	103.0	103.2	102.9	102.4	103.7	102.1	101.7	102.0	101.8	101.7	101.5	101.8	101.2	-----	-----
New York, N.Y.—Northeastern N.J.....	107.5	108.1	107.8	107.4	106.9	107.4	108.1	108.2	106.9	106.3	106.3	106.6	106.8	106.6	104.9	102.9	-----	-----
Philadelphia, Pa.—N.J.....	105.0	105.2	104.3	103.9	104.3	104.3	105.2	105.1	104.5	103.2	103.1	104.1	104.4	104.5	103.1	101.9	-----	-----
Pittsburgh, Pa.....	103.5	103.8	103.3	102.9	102.9	103.6	104.4	104.6	103.7	103.2	103.1	104.1	104.3	103.2	102.4	102.3	-----	-----
Portland, Oreg.—Wash.....	106.2	105.6	105.4	105.2	105.5	106.2	105.8	104.8	104.5	104.1	104.5	104.6	105.2	105.3	103.6	103.0	-----	-----
St. Louis, Mo.—Ill.....	105.9	106.1	105.9	105.1	105.1	105.3	105.5	105.7	104.9	103.1	104.0	104.5	105.0	104.9	103.0	102.0	-----	-----
San Francisco-Oakland, Calif.....	107.0	107.3	106.5	107.0	106.6	107.2	107.1	107.6	107.0	105.9	106.5	106.9	107.0	106.7	105.4	104.0	-----	-----
Scranton, Pa.....	104.9	104.9	104.7	103.8	104.4	104.8	104.4	105.0	104.6	103.1	103.1	103.3	104.4	104.1	103.1	101.3	-----	-----
Seattle, Wash.....	107.2	108.2	107.9	107.4	107.4	107.6	107.8	107.8	107.1	106.7	107.3	107.3	106.9	106.3	105.7	104.5	-----	-----
Washington, D.C.—Md.—Va.....	104.6	104.6	103.9	104.0	104.6	105.0	105.5	105.5	104.6	103.3	102.9	103.6	103.2	103.9	102.0	101.6	-----	-----

<sup>1</sup> See footnote 1, table D-1. Indexes measure time-to-time changes in prices. They do not indicate whether it costs more to live in one city than in another.

<sup>2</sup> The designation "city" refers not only to the central city but to the entire Standard Metropolitan Statistical Area, as defined for the 1960 Census

of Population. The Standard Consolidated Area is used for New York and Chicago.

<sup>3</sup> Average of 50 cities in the "new series"; 46 cities in the "old series."

<sup>4</sup> All items indexes are computed monthly for 5 cities and once every 3 months on a rotating cycle for other cities.

<sup>5</sup> Corrected indexes, January through December 1963.

This is the initial publication of the "new series" CPI. The "new series" index, which results from the revision project announced earlier, is based on up-to-date samples of cities, retail stores, and service establishments. The list of goods and services priced for the index has also been modernized and the expenditure weights reflect the 1960-61 spending patterns of urban wage earners and clerical workers, including single persons. For the U.S. as a whole, an index is also available for families only. The "new series" indexes are issued as continuations of the "old series" with no change in the base period, 1957-59=100. Both the "old" and "new series" indexes will be published through June 1964, after which the "old series" will be discontinued.



TABLE D-3. Indexes of wholesale prices,<sup>1</sup> by group and subgroup of commodities[1957-59=100, unless otherwise specified]<sup>2</sup>

Commodity group	1964	1963												Annual Average	
	Jan. <sup>3</sup>	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	Jan.	1962	1961
All commodities.....	101.0	100.3	100.7	100.5	100.3	100.4	100.6	100.3	100.0	99.7	99.9	100.2	100.5	100.6	100.3
Farm products and processed foods.....	99.7	97.2	99.7	99.1	98.5	98.9	99.8	99.1	98.4	97.6	97.4	98.7	99.8	99.6	98.6
Farm products.....	96.3	93.3	96.2	95.1	95.5	96.3	96.8	94.9	94.4	95.4	95.4	96.5	98.5	97.7	96.0
Fresh and dried fruits and vegetables.....	95.8	94.8	96.1	89.1	88.0	92.5	97.0	97.1	99.8	99.6	99.0	96.5	104.0	97.7	93.7
Grains.....	103.9	101.8	100.3	101.8	102.9	98.5	99.5	101.4	102.9	105.1	103.7	103.0	102.0	98.8	95.6
Livestock and live poultry.....	84.7	79.9	87.9	88.0	88.6	93.5	94.4	89.3	86.8	88.2	85.6	89.5	94.1	96.2	92.5
Plant and animal fibers.....	101.5	101.4	99.8	99.4	99.4	99.6	100.2	101.4	101.7	102.0	101.8	100.8	99.3	98.4	94.8
Fluid milk.....	103.0	103.4	103.2	102.6	101.8	100.6	99.8	97.9	97.3	98.3	99.6	101.1	101.3	101.2	103.9
Eggs.....	106.3	99.8	102.4	97.9	107.8	96.0	87.5	79.2	77.1	81.3	99.8	99.1	100.1	95.2	99.0
Hay, hayseeds, and oilseeds.....	115.5	114.6	117.5	114.1	110.5	111.3	111.1	113.8	112.5	110.7	113.8	113.5	111.9	105.4	107.2
Other farm products.....	99.0	90.6	90.7	90.4	89.0	88.4	89.1	89.3	89.5	89.4	89.0	89.1	87.4	91.8	93.2
Processed foods.....	102.4	100.4	102.5	102.2	100.9	100.9	102.2	102.4	101.7	99.3	99.0	100.6	100.8	101.2	100.7
Cereal and bakery products.....	107.0	106.9	107.3	107.7	107.0	106.0	106.4	107.0	107.6	108.1	108.0	108.6	107.4	107.6	106.1
Meats, poultry and fish.....	91.8	87.7	91.7	93.2	94.2	95.2	96.3	94.1	91.9	90.3	91.8	95.6	97.9	99.1	95.4
Dairy products and ice cream.....	108.0	108.1	107.9	107.4	108.0	107.9	107.3	106.6	106.8	106.9	107.1	108.0	107.8	106.9	107.5
Canned and frozen fruits and vegetables.....	107.2	106.8	106.4	105.8	105.3	104.8	105.7	104.6	103.4	102.9	101.3	99.8	100.0	98.0	101.7
Sugar and confectionery.....	130.3	124.9	131.2	125.4	112.5	111.2	120.3	132.1	133.6	113.9	106.1	105.1	105.0	102.2	101.2
Packaged beverage materials.....	89.7	85.7	84.1	81.8	80.9	80.9	81.1	80.9	80.9	79.1	79.1	79.1	79.1	81.9	83.7
Animal fats and oils.....	88.4	88.4	93.5	90.2	84.1	84.3	82.7	79.2	77.2	79.1	80.0	86.0	82.8	88.4	94.4
Crude vegetable oils.....	75.1	76.7	84.0	84.8	78.6	77.4	83.6	83.3	84.2	83.3	83.8	82.5	81.0	84.5	102.6
Refined vegetable oils.....	74.8	77.4	84.1	82.3	80.8	79.6	84.3	84.4	85.8	84.1	90.0	89.2	88.4	93.1	108.3
Vegetable oil end products.....	87.9	87.9	87.4	86.0	86.2	86.1	87.0	87.0	87.0	87.2	90.5	91.9	91.9	97.3	102.7
Miscellaneous processed foods.....	107.4	107.4	107.8	108.7	106.5	106.5	104.5	103.9	101.8	101.4	101.5	101.5	100.2	101.8	105.8
All commodities except farm products.....	101.5	101.1	101.2	101.2	100.8	100.8	101.1	101.0	100.7	100.2	100.4	100.6	100.7	100.9	100.8
All commodities except farm and foods.....	101.3	101.2	100.9	100.9	100.7	100.8	100.8	100.7	100.5	100.4	100.6	100.6	100.7	100.8	100.8
Textile products and apparel.....	101.3	101.2	101.1	100.7	100.5	100.4	100.4	100.3	100.2	100.1	100.2	100.3	100.4	100.6	99.7
Cotton products.....	101.3	101.5	101.3	100.2	99.9	99.7	99.8	99.7	99.7	100.1	100.2	100.5	100.6	101.7	100.4
Wool products.....	103.1	102.8	101.6	100.6	100.6	100.6	100.5	100.8	100.6	100.8	100.8	100.7	100.7	99.1	97.1
Manmade fiber textile products.....	95.0	94.6	94.4	94.2	94.0	93.9	93.7	93.8	93.8	93.8	93.7	93.7	93.7	93.9	93.4
Silk products.....	121.6	126.3	130.5	126.1	130.1	136.6	134.5	148.0	144.4	150.9	150.9	151.1	149.8	125.9	113.2
Apparel.....	102.3	102.3	102.3	102.5	102.3	102.2	102.2	102.0	101.6	101.3	101.4	101.3	101.3	101.5	101.0
Miscellaneous textile products.....	120.0	116.0	119.0	116.9	116.9	116.5	115.1	117.4	118.2	116.3	114.9	118.2	123.3	122.4	123.4
Hides, skins, leather, and leather products.....	102.3	103.0	103.5	103.4	103.1	103.6	104.3	104.5	104.8	104.5	105.1	105.1	106.0	107.4	106.2
Hides and skins.....	76.1	76.3	82.7	80.5	77.3	80.5	83.5	85.8	87.4	85.0	85.1	85.9	85.2	106.2	107.9
Leather.....	99.5	99.5	99.7	99.5	99.5	100.1	102.2	102.5	103.2	102.8	103.7	104.7	105.2	108.5	106.0
Footwear.....	108.3	108.2	108.2	108.4	108.4	108.4	108.4	108.2	108.2	108.2	108.3	108.3	108.3	108.7	107.4
Other leather products.....	100.3	103.3	103.2	103.4	103.4	103.5	104.0	104.3	104.4	104.5	104.7	104.8	104.9	104.3	103.2
Fuel and related products, and power.....	99.5	99.3	97.9	98.8	99.0	98.9	100.4	100.9	100.4	100.3	100.8	100.3	100.4	100.2	100.7
Coal.....	98.5	98.3	98.3	97.7	97.2	96.2	95.8	94.9	94.2	95.0	98.1	98.4	98.3	96.8	97.7
Coke.....	103.6	103.6	103.6	103.6	103.6	103.6	103.6	103.6	103.6	103.6	103.6	103.6	103.6	103.6	103.6
Gas fuels.....	124.8	124.8	122.3	122.0	121.7	120.9	121.2	120.3	120.1	124.1	127.8	127.8	120.8	119.2	118.7
Electric power.....	101.3	101.3	101.3	101.4	101.8	101.9	102.0	102.2	102.2	102.4	102.4	102.5	102.5	102.8	102.4
Petroleum products, refined.....	96.6	96.1	93.8	95.6	95.9	96.1	98.7	99.9	99.1	98.2	98.2	97.1	98.2	98.2	99.3
Chemicals and allied products.....	96.3	96.2	96.3	96.2	96.0	96.0	96.0	96.3	96.4	96.3	96.8	96.7	96.9	97.5	99.1
Industrial chemicals.....	94.2	94.3	94.2	94.2	94.5	94.6	94.7	95.0	95.0	95.0	95.4	95.2	96.0	96.3	98.4
Prepared paint.....	105.3	105.3	105.1	103.9	103.9	103.9	103.0	103.0	103.0	103.7	103.7	103.8	103.8	103.8	103.6
Paint materials.....	91.1	91.0	91.1	90.8	89.2	89.0	89.2	91.1	91.7	91.5	93.0	93.0	93.0	95.6	99.6
Drugs and pharmaceuticals.....	95.4	95.0	95.0	94.9	94.9	95.0	95.1	95.2	95.2	95.1	95.2	95.1	95.2	96.0	98.3
Fats and oils, inedible.....	83.1	85.0	90.2	88.5	81.3	81.7	81.4	80.6	78.6	77.7	74.5	72.7	71.7	76.3	87.5
Mixed fertilizer.....	103.6	103.5	103.7	103.8	103.8	103.6	103.6	103.6	103.6	103.7	103.6	103.6	103.0	103.8	102.6
Fertilizer materials.....	99.4	98.4	98.4	97.1	97.2	96.9	99.8	100.8	102.3	102.3	102.3	102.3	100.8	101.9	104.3
Other chemicals and allied products.....	99.1	99.1	99.0	99.0	98.9	98.9	98.7	98.6	98.6	98.6	99.5	99.5	99.6	99.4	99.2
Rubber and rubber products.....	93.7	93.8	94.2	94.2	93.4	93.7	93.0	93.1	93.2	94.1	94.1	94.2	94.3	93.3	96.1
Crude rubber.....	89.4	89.9	91.6	91.5	88.9	90.7	91.6	92.5	92.6	92.8	92.7	93.7	93.7	93.6	96.3
Tires and tubes.....	91.3	91.4	91.7	91.7	91.7	91.2	89.1	89.1	89.1	89.0	89.0	89.0	89.0	87.1	92.4
Miscellaneous rubber products.....	97.9	97.9	97.9	97.9	97.2	97.5	97.5	97.5	97.5	99.8	99.8	99.8	99.7	99.4	100.0
Lumber and wood products.....	99.1	99.1	99.2	99.2	99.3	102.6	101.6	98.3	97.5	97.0	96.5	96.1	95.9	96.5	95.9
Lumber.....	99.3	99.2	99.3	99.3	100.7	102.7	102.1	99.2	98.4	97.6	96.6	96.2	95.9	96.5	94.7
Millwork.....	106.7	106.3	106.2	106.2	105.6	104.9	104.2	103.0	102.4	102.4	102.5	102.3	102.3	101.8	101.9
Plywood.....	91.2	92.4	92.5	92.4	92.6	104.1	100.9	92.6	90.9	91.0	91.2	90.5	90.5	92.4	95.7
Pulp, paper, and allied products.....	99.9	99.4	99.4	99.5	99.1	99.1	99.0	99.4	99.1	99.0	99.1	99.1	99.0	100.0	98.8
Woodpulp.....	96.1	94.4	94.4	95.0	91.7	91.7	91.7	91.3	91.3	91.3	90.4	89.4	89.4	93.2	95.0
Wastepaper.....	91.1	90.8	91.0	90.7	90.9	91.2	91.4	90.8	89.8	92.5	96.6	96.1	94.7	97.5	80.5
Paper.....	103.1	102.9	102.9	102.8	102.2	102.2	102.2	102.2	102.2	102.2	102.2	102.2	102.2	102.6	102.2
Paperboard.....	96.5	96.5	96.6	96.6	94.1	94.1	94.1	94.1	94.1	94.1	94.1	94.1	94.1	93.1	92.5
Converted paper and paperboard products.....	100.0	99.5	99.4	99.4	99.8	99.8	99.6	100.3	99.9	99.7	99.7	99.9	99.9	101.0	99.5
Building paper and board.....	96.0	96.0	95.9	96.9	97.6	97.5	97.5	97.5	96.2	95.5	94.1	95.5	95.6	97.2	100.8

See footnotes at end of table.

TABLE D-3. Indexes of wholesale prices,<sup>1</sup> by group and subgroup of commodities—Continued[1957-59=100, unless otherwise specified <sup>2</sup>]

Commodity group	1964	1963												Annual Average	
	Jan. <sup>3</sup>	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	Jan.	1962	1961
All commodities except farm and foods—Continued															
Metals and metal products.....	101.5	101.3	101.0	100.9	100.3	100.1	100.0	100.0	99.9	99.4	99.4	99.4	99.5	100.0	100.7
Iron and steel.....	100.2	100.0	99.9	99.9	99.1	99.0	99.0	99.0	99.3	98.5	98.4	98.6	98.8	99.3	100.7
Nonferrous metals.....	101.4	101.0	100.2	99.9	99.6	99.4	99.0	98.7	98.7	98.2	98.1	98.0	98.0	99.2	100.4
Metal containers.....	104.6	104.6	104.6	104.6	104.7	105.0	105.0	104.9	104.6	104.5	104.5	104.5	104.5	103.7	102.0
Hardware.....	104.4	104.3	104.4	104.4	104.2	104.1	104.1	104.0	103.9	103.9	103.9	104.0	103.8	104.0	103.8
Plumbing fixtures and brass fittings.....	100.5	100.6	100.6	100.6	100.6	100.6	100.6	100.6	100.8	100.8	101.3	101.1	97.5	100.1	103.2
Heating equipment.....	91.9	92.7	92.8	93.1	93.1	93.1	93.3	93.3	93.0	92.9	92.6	92.4	92.5	93.2	94.6
Fabricated structural metal products.....	98.9	99.0	98.9	98.9	98.7	98.4	98.3	98.2	98.2	97.6	97.8	98.0	98.1	98.2	99.0
Fabricated nonstructural metal products.....	108.5	108.2	107.1	107.0	105.0	105.0	105.0	104.9	104.0	103.8	103.7	103.7	103.7	103.9	103.1
Machinery and motive products.....	102.5	102.6	102.5	102.3	102.2	102.1	102.1	102.0	102.0	101.9	102.0	102.2	102.3	102.3	102.3
Agricultural machinery and equipment.....	112.0	111.9	111.4	111.2	110.9	110.9	110.9	111.0	110.9	110.9	111.0	110.8	110.8	109.5	107.4
Construction machinery and equipment.....	111.8	111.2	110.9	110.4	110.1	110.0	109.7	109.6	109.2	108.8	108.8	108.5	108.3	107.8	107.5
Metalworking machinery and equipment.....	110.8	110.8	110.5	110.3	110.2	110.2	109.9	109.6	109.4	109.4	109.1	109.1	109.2	109.3	107.0
General purpose machinery and equipment.....	104.8	104.8	104.7	104.5	104.3	103.9	103.9	103.5	103.4	103.4	103.4	103.6	103.9	103.3	102.8
Miscellaneous machinery.....	104.1	103.7	103.7	103.5	103.5	103.4	103.4	103.4	103.3	103.4	103.7	103.4	103.4	103.4	102.8
Special industry machinery and equipment.....	105.3	105.0	104.7	104.8	104.6	104.2	104.1	103.9	103.9	103.9	103.1	103.1	102.9	101.9	100.4
Electrical machinery and equipment.....	97.1	97.7	97.5	97.2	97.2	97.2	97.2	97.7	97.5	97.0	96.9	97.8	97.8	98.4	100.0
Motor vehicles.....	99.8	99.9	99.9	99.9	99.3	99.5	99.8	99.3	99.8	100.2	100.7	100.8	100.8	100.8	100.8
Transportation equipment, railroad rolling stock.....	100.5	100.5	100.5	100.5	100.5	100.5	100.5	100.5	100.5	100.5	100.5	100.5	100.5	100.5	100.2
Furniture and other household durables.....	98.3	98.0	98.1	98.1	98.1	98.1	98.0	98.1	98.0	98.1	98.2	98.2	98.3	98.8	99.5
Household furniture.....	104.9	104.7	104.8	104.8	104.8	104.6	104.5	104.5	104.4	104.4	104.6	104.5	104.5	103.8	102.8
Commercial furniture.....	103.1	103.1	103.1	103.1	103.0	103.0	102.8	102.8	102.3	102.3	102.3	102.3	102.3	102.3	101.8
Floor coverings.....	100.0	98.0	97.9	97.4	96.8	96.6	96.6	95.9	95.7	95.9	96.0	95.9	96.2	97.0	99.3
Household appliances.....	91.1	91.1	91.2	91.2	91.4	91.7	91.7	91.9	92.0	92.1	92.3	92.3	92.3	94.0	95.2
Television, radio receivers, and phonographs.....	87.1	87.3	87.8	87.8	87.8	87.7	87.7	88.9	88.9	89.4	89.4	90.1	90.1	91.1	95.3
Other household durable goods.....	103.6	103.3	103.4	103.4	103.5	103.3	103.4	103.2	102.9	103.0	102.8	102.8	102.8	103.1	102.5
Nonmetallic mineral products.....	101.1	101.3	101.2	101.3	101.1	101.0	100.9	101.2	101.3	101.5	101.5	101.5	101.4	101.8	101.8
Flat glass.....	101.0	101.2	101.0	101.6	100.0	98.9	96.6	96.6	96.6	96.6	96.6	96.6	96.6	97.0	96.8
Concrete ingredients.....	102.6	103.1	102.9	102.9	103.0	103.0	103.2	103.2	103.0	103.0	103.0	103.0	102.7	103.2	102.8
Concrete products.....	101.2	101.4	101.4	101.3	101.3	101.2	101.2	101.9	101.9	102.2	102.2	102.2	102.2	102.5	102.5
Structural clay products.....	103.5	103.5	103.5	103.4	103.4	103.6	103.5	104.0	104.0	103.8	103.6	103.6	103.7	103.5	103.2
Gypsum products.....	106.1	106.1	106.1	106.1	106.1	105.8	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	103.8
Prepared asphalt roofing.....	87.4	87.4	87.4	87.4	88.2	88.2	88.2	89.1	92.7	94.1	94.1	94.1	89.4	94.8	98.6
Other nonmetallic minerals.....	101.3	101.4	101.4	101.4	100.9	100.7	101.2	101.3	101.4	101.4	101.5	101.5	102.2	102.2	102.2
Tobacco products and bottled beverages.....	107.6	107.5	107.5	107.5	107.5	107.5	107.5	105.8	105.2	104.4	104.3	104.3	104.3	104.1	103.2
Tobacco products.....	105.9	105.9	105.9	105.9	105.7	105.7	105.7	105.7	104.5	102.3	102.2	102.2	102.2	102.1	102.0
Alcoholic beverages.....	101.0	101.0	100.9	100.9	101.0	101.0	101.0	101.0	101.0	101.1	101.1	101.1	101.1	101.0	100.6
Nonalcoholic beverages.....	127.7	127.7	127.7	127.7	127.7	127.7	127.7	118.2	117.4	117.4	117.4	117.4	117.4	116.9	112.8
Miscellaneous products.....	112.6	112.2	110.9	111.2	111.8	111.1	110.4	108.1	107.6	108.0	110.8	111.5	111.6	107.3	103.9
Toys, sporting goods, small arms, ammunition.....	101.2	101.1	101.0	101.1	101.1	101.2	101.0	100.7	100.7	100.7	100.5	101.1	101.3	100.8	100.9
Manufactured animal feeds.....	120.4	119.7	117.2	117.9	119.0	117.7	116.3	112.1	111.2	111.9	117.1	118.2	118.3	110.6	104.6
Notions and accessories.....	99.1	99.1	99.1	99.1	99.1	98.7	98.7	98.7	98.7	98.7	98.7	98.7	98.7	98.7	98.9
Jewelry, watches and photographic equipment.....	103.6	103.6	103.6	103.5	103.4	103.5	103.9	103.8	103.9	103.8	103.9	104.0	104.0	104.2	103.5
Other miscellaneous products.....	101.7	101.4	101.4	101.1	101.1	101.1	100.9	101.3	101.4	101.4	101.7	101.7	101.8	101.3	101.2

<sup>1</sup> As of January 1961, new weights reflecting 1958 values were introduced into the index. See "Weight Revisions in the Wholesale Price Index 1890-1960," *Monthly Labor Review*, February 1962, pp. 175-182.

<sup>2</sup> 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.

<sup>3</sup> Preliminary.

<sup>4</sup> Revised.

<sup>5</sup> Formerly titled "other processed foods."

<sup>6</sup> Formerly titled "other textile products."

<sup>7</sup> January 1958=100.

<sup>8</sup> Formerly titled "other rubber products."

<sup>9</sup> January 1961=100.

TABLE D-4. Indexes of wholesale prices for special commodity groupings<sup>1</sup>[1957-59=100, unless otherwise specified]<sup>2</sup>

Commodity group	1964													Annual average	
	Jan. <sup>3</sup>	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	Jan.	1962	1961
All foods.....	102.0	99.9	101.9	101.0	100.2	100.1	101.3	101.1	100.7	98.7	99.0	100.1	101.1	100.6	100.0
All fish.....	109.8	107.5	106.1	106.8	107.1	105.5	110.0	114.4	115.9	113.6	117.3	118.4	121.9	119.2	107.9
All commodities except farm products.....	101.5	101.1	101.2	101.2	100.8	100.8	101.1	101.0	100.7	100.2	100.4	100.6	100.7	100.9	100.8
Textile products, excluding hard fiber products.....	99.5	99.4	99.1	98.3	98.1	98.0	97.9	98.0	98.0	98.2	98.3	98.4	98.4	98.8	97.7
Bituminous coal—domestic sizes.....	101.2	101.0	100.9	100.6	99.0	97.2	96.3	94.2	92.9	95.5	100.6	101.5	101.5	98.3	99.9
Refined petroleum products.....	96.6	96.1	93.8	95.6	95.9	96.1	98.7	99.9	99.1	98.2	98.2	97.1	98.2	98.2	99.3
East Coast markets.....	97.8	97.8	95.1	93.4	93.4	96.2	96.2	96.2	96.2	98.9	98.9	98.9	98.9	99.4	100.9
Midcontinent markets.....	94.5	93.0	85.4	96.8	99.7	95.4	99.7	105.4	102.6	99.7	98.6	88.6	94.4	98.2	99.6
Gulf Coast markets.....	96.7	96.1	96.1	95.4	95.4	97.1	100.1	99.7	99.7	97.7	97.7	97.9	97.9	98.6	101.2
Pacific Coast markets.....	87.7	89.2	89.2	89.2	89.7	87.2	88.2	89.7	90.7	90.7	90.7	90.7	91.7	90.9	89.9
Midwest markets <sup>4</sup> .....	95.5	94.6	90.8	92.1	90.9	92.1	94.6	95.8	93.3	94.5	95.5	98.0	97.6	94.2	93.5
Soaps.....	105.4	105.4	105.4	105.4	105.4	105.4	103.5	103.5	103.5	103.5	103.5	103.5	103.5	102.6	101.4
Synthetic detergents.....	99.4	99.4	99.4	99.6	99.6	99.6	99.6	99.6	99.6	99.6	99.6	99.6	99.6	99.7	100.8
Pharmaceutical preparations.....	97.5	97.1	96.9	96.7	96.7	96.8	96.9	96.8	96.9	96.8	96.8	96.6	96.6	97.3	98.9
Ethical preparations <sup>5</sup> .....	96.2	95.8	95.8	95.5	95.5	95.1	95.8	95.7	95.7	95.7	95.7	95.7	95.7	96.9	99.3
Anti-infectives <sup>5</sup> .....	88.2	88.2	88.2	88.2	88.3	88.3	88.3	88.3	88.5	88.5	88.5	88.5	88.5	93.1	99.3
Anti-arthritis <sup>5</sup> .....	100.6	100.6	100.6	100.6	100.6	100.6	100.6	100.6	100.6	100.6	100.6	100.6	100.6	100.6	100.3
Sedatives and hypnotics <sup>5</sup> .....	113.2	113.2	113.2	113.2	113.2	113.2	113.2	113.2	113.2	112.5	112.5	112.5	112.5	112.5	102.6
Ataractics <sup>5</sup> .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Anti-spasmodics and anti-cholinergics <sup>5</sup> .....	100.2	100.2	100.2	100.2	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Cardiovasculars and anti-hypertensives <sup>5</sup> .....	97.6	97.6	97.6	97.6	97.6	101.3	101.3	101.3	101.3	100.7	100.7	100.7	100.7	100.5	100.5
Diabetics <sup>5</sup> .....	103.8	103.8	103.8	103.8	103.8	103.8	103.8	103.8	103.8	103.8	103.8	103.8	103.8	104.0	101.9
Hormones <sup>5</sup> .....	100.6	100.6	100.6	100.6	100.6	100.6	100.0	100.0	100.0	99.6	99.6	99.6	99.6	99.6	100.0
Diuretics <sup>5</sup> .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Dermatologicals <sup>5</sup> .....	108.7	108.7	108.7	104.3	104.3	104.3	104.3	100.8	100.8	100.8	100.8	100.8	100.8	100.7	100.2
Hermatincs <sup>5</sup> .....	108.8	108.8	108.8	108.8	108.8	108.8	108.8	108.8	108.8	108.8	108.8	108.8	108.8	108.5	100.1
Analgesics <sup>5</sup> .....	101.8	101.8	101.8	101.8	101.8	101.8	101.8	101.8	101.8	101.8	101.8	101.8	101.8	101.8	106.9
Anti-obesity preparations <sup>5</sup> .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Cough and cold preparations <sup>5</sup> .....	104.0	96.8	96.8	96.8	97.0	100.4	100.4	100.4	100.7	100.7	100.7	100.7	100.7	100.0	99.0
Vitamins <sup>5</sup> .....	87.7	87.7	87.7	87.7	87.7	87.7	87.7	88.1	88.1	88.1	88.1	88.1	88.1	88.1	95.4
Proprietary preparations <sup>5</sup> .....	102.8	102.1	101.6	101.6	101.5	100.7	101.5	101.5	101.6	101.6	101.6	101.0	100.9	100.5	100.1
Vitamins.....	100.3	100.3	100.3	100.3	100.3	100.3	100.3	100.3	100.3	100.3	100.3	100.3	100.3	100.1	100.0
Cough and cold preparations <sup>5</sup> .....	99.9	99.2	99.2	99.2	98.6	98.6	100.1	100.1	100.1	100.1	100.1	100.1	99.5	100.0	100.0
Laxatives and elimination aids <sup>5</sup> .....	104.7	104.4	103.8	103.8	103.8	103.8	103.8	103.8	103.8	103.8	103.8	101.7	101.7	101.1	99.8
Internal analgesics <sup>5</sup> .....	102.2	101.9	101.9	101.9	101.9	101.9	101.9	101.9	101.9	101.9	101.9	101.3	101.3	101.2	100.4
Tonics and alteratives <sup>5</sup> .....	100.2	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
External analgesics <sup>5</sup> .....	102.8	102.3	102.3	102.3	102.3	102.3	102.3	102.3	102.3	102.3	102.3	102.3	102.3	100.8	100.0
Antiseptics <sup>5</sup> .....	108.4	104.9	104.9	104.9	104.9	102.9	102.9	102.9	102.9	102.9	102.9	102.9	101.7	100.2	100.0
Antacids <sup>5</sup> .....	103.0	103.0	98.9	98.9	98.9	98.9	98.9	98.9	100.1	100.1	100.1	100.1	100.1	99.6	100.0
Lumber and wood products (excluding millwork).....	97.5	97.6	97.8	97.8	98.9	102.8	101.7	97.7	96.7	96.1	95.4	94.9	94.6	95.6	94.7
Softwood lumber.....	97.9	97.8	97.9	98.1	99.9	102.6	101.9	98.5	97.5	96.5	95.6	95.3	95.0	95.9	93.5
Pulp, paper, and allied products (excluding building paper and board).....	100.1	99.6	99.6	99.6	99.2	99.2	99.1	99.5	99.2	99.2	99.2	99.3	99.1	100.1	98.7
Special metals and metal products <sup>6</sup> .....	101.5	101.4	101.1	101.1	100.5	100.4	100.4	100.2	100.2	100.0	100.1	100.2	100.2	100.5	101.0
Steel mill products.....	103.1	103.1	103.1	103.0	102.0	102.0	102.1	102.1	102.0	101.2	101.1	101.3	101.3	101.4	101.7
Machinery and equipment.....	103.6	103.7	103.5	103.3	103.2	103.0	103.0	103.1	103.0	102.7	102.6	102.9	103.0	102.9	102.9
Agricultural machinery (including tractors).....	113.3	113.2	112.6	112.4	112.1	112.1	112.0	112.2	112.2	112.1	112.0	111.9	111.8	110.5	108.3
Metalworking machinery.....	110.9	110.8	110.4	110.1	109.9	109.9	109.5	109.1	108.9	108.8	108.4	108.5	108.6	108.8	106.6
All tractors.....	113.8	113.1	112.6	111.9	111.3	111.2	110.9	111.3	111.1	110.7	110.6	100.5	110.4	109.4	108.0
Industrial valves.....	108.0	107.8	107.8	107.8	107.2	106.7	107.5	107.4	107.4	107.4	107.4	107.4	107.8	107.4	108.7
Industrial fittings.....	100.0	100.0	100.0	100.0	99.2	96.9	95.4	91.7	91.1	90.9	90.9	94.6	94.6	93.0	88.2
Antifriction bearings and components.....	90.8	90.8	90.8	90.8	90.8	90.8	90.8	90.8	90.8	90.8	90.8	90.8	90.8	90.8	92.5
Abrasive grinding wheels.....	96.5	96.5	96.3	96.3	96.3	96.3	96.3	96.3	96.4	96.4	97.7	97.7	97.7	98.5	96.2
Construction materials.....	98.8	98.8	98.8	98.8	99.0	99.7	99.3	98.3	98.1	97.8	97.7	97.6	97.7	98.3	98.6

<sup>1</sup> See footnote 1, table D-3.<sup>2</sup> See footnote 2, table D-3.<sup>3</sup> Preliminary.<sup>4</sup> Revised.<sup>5</sup> New series. January 1961=100.<sup>6</sup> Metals and metal products, agricultural machinery and equipment, and motor vehicles.



TABLE D-5. Indexes of wholesale prices,<sup>1</sup> by stage of processing and durability of product[1957-59=100]<sup>2</sup>

Commodity group	1963													Annual average	
	Jan. <sup>3</sup>	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	Jan.	1962	1961
All commodities.....	101.0	100.3	100.7	100.5	100.3	100.4	100.6	100.3	100.0	99.7	99.9	100.2	100.5	100.6	100.3
<i>Stage of processing</i>															
Crude materials for further processing.....	95.2	92.6	95.1	94.8	94.8	95.7	96.1	94.8	94.2	95.0	94.5	95.6	96.8	97.1	96.1
Crude foodstuffs and feedstuffs.....	94.0	90.1	94.2	93.8	94.0	95.4	96.1	93.7	92.8	93.9	92.8	94.7	97.1	96.8	94.9
Crude nonfood materials except fuel.....	96.7	96.3	96.1	96.1	95.6	95.6	95.9	96.4	96.6	96.5	96.7	96.4	95.8	97.4	97.9
Crude nonfood materials, except fuel, for manufacturing.....	96.2	95.7	95.5	95.5	94.9	94.9	95.3	95.8	96.0	95.9	96.2	95.8	95.2	96.9	97.4
Crude nonfood materials, except fuel, for construction.....	102.6	103.1	103.0	102.9	103.0	103.0	103.2	103.2	103.0	103.0	103.1	103.0	102.7	103.2	102.8
Crude fuel.....	104.6	104.6	103.7	103.3	102.9	102.0	101.9	101.0	100.6	102.3	105.4	105.6	103.3	101.8	102.3
Crude fuel for manufacturing.....	104.5	104.4	103.6	103.3	102.8	102.0	101.8	101.0	100.6	102.3	105.3	105.6	103.2	101.8	102.2
Crude fuel for nonmanufacturing.....	105.0	104.9	104.1	103.6	103.1	102.2	102.1	101.2	100.7	102.5	105.8	106.0	103.5	102.0	102.4
Intermediate materials, supplies, and components.....	101.3	101.1	101.0	100.9	100.5	100.5	100.6	100.6	100.5	99.9	100.0	100.1	100.2	100.2	100.3
Intermediate materials and components for manufacturing.....	100.5	100.2	100.4	100.1	99.1	99.1	99.4	99.7	99.7	98.8	98.6	98.7	98.8	99.2	99.8
Intermediate materials for food manufacturing.....	109.2	107.1	110.6	108.8	103.7	102.9	106.4	109.8	110.2	103.5	101.2	101.2	101.0	100.5	102.6
Intermediate materials for nondurable manufacturing.....	97.6	97.5	97.4	97.2	96.6	96.6	96.8	97.0	97.1	97.1	97.1	97.2	97.3	98.0	98.6
Intermediate materials for durable manufacturing.....	101.8	101.6	101.4	101.3	100.8	101.0	100.8	100.4	100.1	99.6	99.7	99.8	100.0	100.4	100.5
Components for manufacturing.....	99.4	98.6	99.4	99.2	99.0	98.7	98.6	98.7	98.6	98.2	98.2	98.5	98.6	98.8	99.6
Materials and components for construction.....	100.0	100.1	100.0	99.0	99.8	100.4	100.1	99.4	99.2	99.0	98.9	98.9	98.8	99.3	99.7
Processed fuels and lubricants.....	99.8	99.7	98.3	99.4	99.9	99.8	101.4	101.8	101.4	100.8	100.8	100.3	100.6	101.2	101.6
Processed fuels and lubricants for manufacturing.....	101.2	101.1	100.0	100.8	101.2	101.1	102.3	102.6	102.4	102.0	102.2	101.9	101.9	102.3	102.5
Processed fuels and lubricants for nonmanufacturing.....	97.3	97.3	95.5	97.1	97.6	97.6	99.7	100.3	99.7	98.6	98.4	97.6	98.4	99.4	100.1
Containers, nonreturnable.....	101.0	100.4	100.6	100.6	100.9	101.0	100.8	101.4	101.2	100.9	101.1	101.4	101.6	102.2	100.9
Supplies.....	107.4	107.0	106.3	106.5	106.6	106.2	105.8	105.0	104.7	105.1	105.4	106.7	106.6	104.5	102.3
Supplies for manufacturing.....	105.3	105.3	105.4	105.4	105.1	105.0	105.0	105.1	105.2	105.9	105.7	105.8	105.7	105.7	105.2
Supplies for nonmanufacturing.....	107.6	107.1	106.0	106.3	106.6	106.1	105.6	104.3	104.0	104.2	106.1	106.5	106.4	103.5	100.6
Manufactured animal feeds.....	113.6	112.9	110.6	111.2	112.2	110.9	109.7	105.6	104.8	105.4	110.5	111.4	111.5	104.1	97.5
Other supplies.....	102.0	101.6	101.4	101.4	101.3	101.3	101.2	101.6	101.6	101.6	101.5	101.5	101.3	101.3	100.5
Finished goods (goods to users, including raw foods and fuels).....	102.1	101.4	101.8	101.6	101.5	101.4	101.8	101.5	101.1	100.8	101.1	101.5	101.8	101.7	101.4
Consumer finished goods.....	101.4	100.6	101.1	100.9	100.8	100.8	101.2	100.8	100.4	99.9	100.3	100.9	101.2	101.2	100.9
Consumer foods.....	101.4	99.4	101.0	100.4	100.3	100.3	101.0	100.1	99.4	98.2	99.0	100.4	101.4	101.3	100.4
Consumer crude foods.....	100.8	98.8	100.2	95.4	97.1	95.7	95.4	92.5	93.2	94.2	99.5	98.9	103.4	98.6	97.6
Consumer processed foods.....	101.5	99.4	101.2	101.2	100.8	101.0	101.9	101.3	100.3	98.9	98.9	100.7	101.1	101.7	100.8
Consumer other nondurable goods.....	102.4	102.2	101.7	102.0	101.9	101.9	102.3	102.1	101.8	101.6	101.8	101.7	101.7	101.6	101.5
Consumer durable goods.....	99.4	99.5	99.6	99.6	99.4	99.3	99.4	99.3	99.4	99.5	99.7	99.8	99.8	100.0	100.5
Producer finished goods.....	105.6	103.6	103.4	103.2	103.0	103.0	103.0	103.0	102.9	102.9	102.9	103.0	103.0	102.9	102.5
Producer finished goods for manufacturing.....	105.6	105.6	105.5	105.3	105.1	105.1	105.0	104.9	104.7	104.7	104.5	104.6	104.7	104.4	103.8
Producer finished goods for nonmanufacturing.....	101.6	101.5	101.3	101.1	100.9	101.0	101.1	101.2	101.1	101.2	101.4	101.4	101.3	101.4	101.2
<i>Durability of product</i>															
Total durable goods.....	101.6	101.6	101.5	101.4	101.1	101.2	101.1	100.9	100.8	100.6	100.6	100.7	100.7	101.0	101.3
Total nondurable goods.....	100.3	99.2	100.0	99.8	99.5	99.6	100.1	99.8	99.4	99.0	99.2	99.7	100.2	100.1	99.6
Total manufactures.....	101.2	100.9	100.9	100.9	100.7	100.8	101.0	100.8	100.4	100.0	100.2	100.4	100.6	100.8	100.7
Durable manufactures.....	101.9	101.9	101.8	101.7	101.4	101.5	101.5	101.2	101.1	100.9	100.9	101.0	101.1	101.3	101.4
Nondurable manufactures.....	100.5	99.9	100.1	100.2	99.9	100.0	100.4	100.2	99.5	99.0	99.3	99.7	100.0	100.1	100.0
Total raw or slightly processed goods.....	99.4	97.1	99.2	98.4	98.0	98.2	98.9	98.2	98.4	98.4	98.3	99.1	100.2	99.5	98.3
Durable raw or slightly processed goods.....	92.2	91.2	90.5	90.7	90.5	90.0	89.3	89.3	89.9	89.4	88.7	88.6	87.9	89.2	95.2
Nondurable raw or slightly processed goods.....	99.8	97.4	99.7	98.8	98.5	98.7	99.5	98.7	98.9	98.9	98.9	99.7	100.9	100.1	98.5

<sup>1</sup> See footnote 1, table D-3.<sup>2</sup> See footnote 2, table D-3.<sup>3</sup> Preliminary.<sup>4</sup> Revised.

NOTE: For description of the series by stage of processing, see "New BLS Economic Sector Indexes of Wholesale Prices," *Monthly Labor Review*, December 1955, pp. 1448-1453; and by durability of product and data beginning with 1947, see *Wholesale Prices and Price Indexes, 1957*, BLS Bulletin 1235 (1958).

## E.—Work Stoppages

TABLE E-1. Work stoppages resulting from labor-management disputes <sup>1</sup>

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	In effect during month	Number	Percent of estimated working time
1935-39 (average).....	2,862	-----	1,130,000	-----	16,900,000	0.27
1947-49 (average).....	3,573	-----	2,380,000	-----	39,700,000	.46
1945.....	4,750	-----	3,470,000	-----	38,000,000	.47
1946.....	4,985	-----	4,600,000	-----	116,000,000	1.43
1947.....	3,693	-----	2,170,000	-----	34,600,000	.41
1948.....	3,419	-----	1,900,000	-----	34,100,000	.37
1949.....	3,606	-----	3,030,000	-----	50,500,000	.59
1950.....	4,843	-----	2,410,000	-----	38,800,000	.44
1951.....	4,737	-----	2,220,000	-----	22,900,000	.23
1952.....	5,117	-----	3,540,000	-----	59,100,000	.57
1953.....	5,091	-----	2,400,000	-----	28,300,000	.26
1954.....	3,468	-----	1,530,000	-----	22,600,000	.21
1955.....	3,825	-----	2,650,000	-----	28,200,000	.26
1956.....	3,825	-----	1,900,000	-----	33,100,000	.29
1957.....	3,673	-----	1,390,000	-----	16,500,000	.14
1958.....	3,094	-----	2,060,000	-----	23,900,000	.22
1959.....	3,708	-----	1,880,000	-----	69,000,000	.61
1960.....	3,333	-----	1,320,000	-----	19,100,000	.17
1961.....	3,367	-----	1,450,000	-----	16,300,000	.14
1962.....	3,614	-----	1,230,000	-----	18,600,000	.16
1963: January <sup>2</sup> .....	230	360	75,000	185,000	2,340,000	.23
February <sup>2</sup> .....	200	320	60,000	120,000	1,100,000	.12
March <sup>2</sup> .....	225	350	45,000	90,000	1,110,000	.12
April <sup>2</sup> .....	350	475	100,000	130,000	1,050,000	.10
May <sup>2</sup> .....	425	600	125,000	165,000	1,750,000	.17
June <sup>2</sup> .....	450	675	135,000	190,000	1,740,000	.18
July <sup>2</sup> .....	400	660	115,000	220,000	2,090,000	.20
August <sup>2</sup> .....	325	575	75,000	185,000	1,620,000	.15
September <sup>2</sup> .....	300	550	100,000	155,000	1,100,000	.11
October <sup>2</sup> .....	290	500	95,000	160,000	1,500,000	.13
November <sup>2</sup> .....	180	425	70,000	145,000	1,400,000	.14
December <sup>2</sup> .....	80	300	30,000	80,000	1,000,000	.10
1964: January <sup>2</sup> .....	210	370	60,000	100,000	1,010,000	.10

<sup>1</sup> 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 shortage.

<sup>2</sup> Preliminary.

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