

UNITED STATES DEPARTMENT OF LABOR

L. B. Schwellenbach, *Secretary*

BUREAU OF LABOR STATISTICS

Ewan Clague, *Commissioner*

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# Wages of Office Workers in Metalworking Industries January 1945



*Bulletin No. 886*

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## Letter of Transmittal

UNITED STATES DEPARTMENT OF LABOR,  
BUREAU OF LABOR STATISTICS,  
*Washington, D. C., November 4, 1946.*

The SECRETARY OF LABOR:

I have the honor to transmit herewith a report on wages of office workers in metalworking industries, January 1945. This report was prepared in the Bureau's Wage Analysis Branch by Lily Mary David. Field work for the survey was conducted under the direction of the Bureau's regional wage analysts.

EWAN CLAGUE, *Commissioner.*

HON. L. B. SCHWELLENBACH,  
*Secretary of Labor.*

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## Bulletin No. 886 of the

### United States Bureau of Labor Statistics

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## Wages of Office Workers in Metalworking Industries, January 1945

THE organization of modern manufacturing has led to a relative expansion of the labor force required for record keeping and business transactions. Almost a tenth of the country's present manufacturing employees are office or clerical workers, a third of whom are employed in metalworking industries.

The wage data presented here for a selected number of key office occupations are based on surveys of 18 industries<sup>1</sup> covering about 6,400 establishments,<sup>2</sup> or about a fifth of all metalworking plants in the United States. Because this summary is a byproduct of individual industry studies, certain important metalworking industries were not covered, notably blast furnaces, steel works, and rolling mills, airframe manufacture, and shipbuilding, as well as central offices not operated at the site of industrial plants.

The data consist of average hourly earnings, excluding premium pay for overtime and nonincentive bonuses but including any cost-of-living adjustments. In the case of salaried workers, hourly earnings were computed by dividing salaries for the normal workweek by normal rather than actual hours of work.<sup>3</sup>

Information is presented for only selected office jobs. In the main, these are the lower paid, more standardized office occupations; variations in functions within the more highly paid jobs make interplant comparisons difficult and of limited significance. Accordingly the study includes relatively few jobs in which appreciable numbers of men were employed.

### *Average Hourly Earnings*

Office workers earned about one-fifth more in the metalworking industries than in department stores. There was, however, no consistent variation in office workers' earnings between metalworking

<sup>1</sup> The industries included in the summary are aircraft engines and engine parts, communication equipment, electric generating and distribution equipment, electroplating and polishing, fabricated structural steel, ferrous and nonferrous foundries, iron and steel forgings, machine-tool accessories, machine tools, machinery, motor vehicles and vehicle bodies, power boilers, radio and radio equipment, sheet metal, small arms, tanks, and tool and die jobbing shops.

<sup>2</sup> The proportion of establishments studied varied among industries and, within each industry, was also somewhat higher for large cities and large establishments. The effect of these varying proportions on the wage information presented was offset by appropriate weighting but the information on wage practices, presented in terms of number of establishments, has not been adjusted to compensate for varying coverage.

<sup>3</sup> Detail on hourly earnings and wage practices for the individual industries studied is available upon request.

<sup>4</sup> About 700 of these employed no office workers. Within each industry, establishments were selected to provide a representative picture of wage levels in all sections of the country. They were visited by field representatives of the Bureau of Labor Statistics, who transcribed wage data from pay rolls and other basic records and classified workers according to uniform job descriptions. These descriptions are available upon request.

<sup>5</sup> The number of workers refers to estimated total employment in the industries studied rather than only in the establishments actually surveyed.

TABLE 1.—*Straight-Time Average Hourly Earnings<sup>1</sup> for Selected Office Occupations in Selected Metalworking Industries, by Region, January 1945*

Occupation, grade and sex	United States		New England		Middle Atlantic		Border States		South-east <sup>2</sup>	
	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings						
<i>Men</i>										
Bookkeepers, hand.....	1, 140	\$1. 12	100	\$1. 07	252	\$1. 16	24	\$1. 05	15	\$1. 09
Clerks, accounting.....	2, 725	1. 04	168	. 98	607	1. 04	54	1. 04	7	( <sup>3</sup> )
Clerks, general.....	1, 306	. 85	105	. 81	336	. 71	20	. 75	22	. 76
Clerks, order.....	1, 118	1. 00	115	1. 00	235	1. 01	16	1. 03	11	. 99
Clerks, pay roll.....	1, 070	. 96	96	. 88	247	. 94	27	. 93	8	( <sup>3</sup> )
Office boys.....	878	. 55	149	. 53	282	. 54	25	. 50	2	( <sup>3</sup> )
<i>Women</i>										
Billing-machine operators.....	1, 575	. 73	228	. 70	272	. 74	47	. 66	8	( <sup>3</sup> )
Bookkeepers, hand.....	5, 259	. 92	798	. 86	1, 464	. 96	86	. 82	29	. 95
Bookkeeping-machine operators:										
Class A.....	753	. 88	130	. 83	78	. 97	14	. 86	2	( <sup>3</sup> )
Class B.....	1, 706	. 75	243	. 70	280	. 78	20	. 74	5	( <sup>3</sup> )
Class C.....	403	. 68	70	. 64	99	. 64	13	. 76	2	( <sup>3</sup> )
Calculating-machine operators:										
Class A.....	2, 176	. 79	286	. 68	547	. 81	7	( <sup>3</sup> )	8	( <sup>3</sup> )
Class B.....	3, 165	. 69	525	. 66	693	. 70	74	. 71	7	( <sup>3</sup> )
Clerks, accounting.....	8, 122	. 76	948	. 70	1, 810	. 78	131	. 71	24	. 73
Clerks, file, class A.....	1, 183	. 72	141	. 68	234	. 70	47	. 71		
Clerks, file, class B.....	4, 619	. 60	579	. 58	967	. 58	227	. 61	19	. 63
Clerks, general.....	14, 764	. 65	3, 188	. 61	3, 552	. 64	63	. 63	84	. 62
Clerks, order.....	2, 302	. 73	363	. 70	516	. 76	17	. 76	5	( <sup>3</sup> )
Clerks, pay roll.....	7, 625	. 73	1, 492	. 69	1, 730	. 73	261	. 72	56	. 70
Clerk-typists.....	14, 878	. 65	2, 547	. 61	2, 883	. 64	260	. 66	30	. 64
Office girls.....	1, 971	. 55	316	. 51	675	. 53	46	. 54	7	( <sup>3</sup> )
Stenographers, class A.....	9, 490	. 81	1, 305	. 77	2, 241	. 78	191	. 82	98	. 76
Stenographers, class B.....	13, 985	. 69	1, 352	. 66	3, 993	. 69	300	. 67	68	. 64
Switchboard operators.....	1, 896	. 73	291	. 69	591	. 74	70	. 66	7	( <sup>3</sup> )
Switchboard operators-receptionists.....	3, 246	. 70	368	. 66	867	. 69	33	. 63	14	. 62
Transcribing-machine operators:										
Class A.....	658	. 76	109	. 72	110	. 75			1	( <sup>3</sup> )
Class B.....	822	. 67	140	. 59	169	. 70	10	. 54	1	( <sup>3</sup> )
Typists, copy, class A.....	2, 039	. 70	284	. 66	591	. 71	77	. 73		
Typists, copy, class B.....	4, 080	. 61	514	. 58	1, 156	. 62	110	. 58		

See footnotes at end of table.

industries and electric light and power companies, another large employer of office workers.<sup>4</sup> In some jobs and in some regions, utility workers' average earnings were higher; in others the reverse relationship was found and in a few jobs there was relatively little difference between the two industries. An average for women based on the numerically most important jobs showed only a 1-cent difference for the country as a whole in favor of office workers in utilities. There was a tendency for earnings of office workers to be higher in the metalworking industries in the Great Lakes, Middle West, and Pacific regions and for utility workers' earnings to be higher in the New England, Middle Atlantic, Southeast, and Mountain regions, whereas earnings were, on the average, about the same for both industries in the Southwest.<sup>5</sup>

Within the metalworking group, earnings of office workers were relatively low in the machinery industries and high in tool and die

<sup>4</sup> The information for department stores and utilities was based on an April 1945 pay-roll period.

<sup>5</sup> Information was not available to permit such a comparison for the Border States.

TABLE 1.—*Straight-Time Average Hourly Earnings<sup>1</sup> for Selected Office Occupations in Selected Metalworking Industries, by Region, January 1945—Continued*

Occupation, grade and sex	Great Lakes		Middle West		South-west		Mountain		Pacific	
	Number of workers	Average hourly earnings								
<i>Men</i>										
Bookkeepers, hand.....	470	\$1.16	81	\$0.98	66	\$1.05	5	( <sup>2</sup> )	127	\$1.12
Clerks, accounting.....	1,507	1.07	251	.98	32	.87	9	( <sup>2</sup> )	100	1.10
Clerks, general.....	828	.92	27	.72	25	.76	2	( <sup>2</sup> )	33	.91
Clerks, order.....	513	1.03	132	.87	20	.85	2	( <sup>2</sup> )	74	1.00
Clerks, pay roll.....	529	1.02	121	.81	13	.89	11	\$0.79	18	1.12
Office boys.....	344	.59	64	.44	3	( <sup>2</sup> )	4	( <sup>2</sup> )	5	( <sup>2</sup> )
<i>Women</i>										
Billing-machine operators.....	853	.75	96	.71	9	( <sup>2</sup> )	3	( <sup>2</sup> )	59	.82
Bookkeepers, hand.....	2,099	.92	139	.82	66	.83	21	.91	557	1.00
Bookkeeping-machine operators:										
Class A.....	340	.87	74	.79	7	( <sup>2</sup> )	6	( <sup>2</sup> )	102	.96
Class B.....	846	.76	241	.74	3	( <sup>2</sup> )	1	( <sup>2</sup> )	67	.85
Class C.....	186	.72	25	.57					8	( <sup>2</sup> )
Calculating-machine operators:										
Class A.....	1,221	.77	47	.76	4	( <sup>2</sup> )	12	.73	44	.86
Class B.....	1,670	.69	135	.69	8	( <sup>2</sup> )	8	( <sup>2</sup> )	45	.82
Clerks, accounting.....	4,133	.77	459	.73	57	.74	32	.75	528	.87
Clerks, file, class A.....	659	.75	67	.63	2	( <sup>2</sup> )			33	.78
Clerks, file, class B.....	2,529	.61	178	.56	5	( <sup>2</sup> )	5	( <sup>2</sup> )	110	.68
Clerks, general.....	7,079	.67	143	.59	76	.69	5	( <sup>2</sup> )	574	.79
Clerks, order.....	1,151	.72	135	.61	5	( <sup>2</sup> )	6	( <sup>2</sup> )	104	.84
Clerks, pay roll.....	3,303	.74	369	.67	37	.73	27	.63	350	.87
Clerk-typists.....	7,746	.66	596	.62	64	.63	26	.69	726	.77
Office girls.....	806	.57	145	.61	4	( <sup>2</sup> )	1		71	.63
Stenographers, class A.....	4,367	.82	403	.76	102	.80	22	.77	761	.89
Stenographers, class B.....	6,776	.69	597	.67	133	.69	57	.66	709	.83
Switchboard operators.....	785	.74	75	.73	11	.66	1	( <sup>2</sup> )	65	.82
Switchboard operators-receptionists.....	1,461	.73	148	.63	46	.65	11	.66	298	.80
Transcribing-machine operators:										
Class A.....	339	.77	72	.77	2	( <sup>2</sup> )			25	.78
Class B.....	393	.67	101	.69					8	( <sup>2</sup> )
Typists, copy, class A.....	978	.70	71	.67	3	( <sup>2</sup> )	2	( <sup>2</sup> )	33	.78
Typists, copy, class B.....	1,995	.61	200	.61	2	( <sup>2</sup> )	19	.62	84	.74

<sup>1</sup> Excluding premium pay for overtime and night work.

<sup>2</sup> Based primarily on cities of 100,000 or more population.

<sup>3</sup> Insufficient number of workers to justify presentation of an average.

jobbing shops, aircraft engine and parts plants, and nonferrous foundries. For most office jobs average hourly earnings in the machinery industries were about 5 percent below the average in all metalworking industries in the country as a whole and in the Great Lakes region. In tool-and-die jobbing shops, aircraft engine and parts establishments, and nonferrous foundries, earnings for most jobs ranged from 5 to 15 percent above the over-all metalworking averages. In the New England, Middle Atlantic, and Pacific regions the variation in earnings from the metalworking average was generally less consistent from job to job than in the Great Lakes. For specific office occupations in ferrous foundries and machine-tool, communication-equipment, machine-tool accessory, and structural-steel establishments, there was no consistent tendency for wages to be higher or lower than the average for all metalworking.

## VARIATION AMONG OCCUPATIONS

In about two-thirds of the key jobs studied in January 1945, women's earnings in the metalworking industries averaged between 65 and 75 cents an hour, exclusive of premium pay for overtime and nonincentive bonuses (table 1). Among the jobs surveyed that covered the largest group of workers, general clerks and clerk-typists received an average of 65 cents per hour, class B stenographers 69 cents, accounting clerks 76 cents, and class A stenographers 81 cents an hour.<sup>6</sup> Earnings of men averaged about one-third more in 4 of the 6 jobs in which they were employed in appreciable numbers—accounting, order, pay-roll, and general clerks.

## GEOGRAPHIC VARIATIONS

Earnings on the Pacific Coast were distinctly higher—about 15 percent on the average—than in any other region. Although for two-thirds of the individual jobs earnings varied among the other regions by at least 15 percent, the position of each region was not consistent from job to job; consequently an average based on the entire group of key jobs showed a range in the other regions of about 9 percent, with the Great Lakes region at the upper limit and New England at the lower limit.<sup>7</sup>

On a city basis, women office workers in the metalworking industries in Detroit were generally the highest paid.<sup>8</sup> Los Angeles followed Detroit, and San Francisco held third place. The position of other cities varied appreciably among jobs, but New York, Cleveland, and Chicago in general had the next highest wages. Among cities with a population of 500,000 or more, Boston, Milwaukee, Philadelphia, and St. Louis ranked relatively low.<sup>9</sup>

Table 2 presents office workers' earnings in a group of 16 wage areas.<sup>10</sup> Included are all wage areas built around cities of 500,000 or more, except Washington, D. C., as well as a few other large cities in the leading metalworking sections of the United States.

<sup>6</sup> Class A stenographers were defined as those who take and transcribe dictation of a difficult nature involving a varied technical or specialized vocabulary or who take rapid and varied but less technical dictation. Class B stenographers are those who take and transcribe dictation involving a limited and routine vocabulary or a simple but varied vocabulary at ordinary speed.

<sup>7</sup> Data for the Southeast are based almost entirely on cities of at least 100,000; in view of the relatively small amount of metalworking in this section of the country outside of these cities, the data are believed to be reasonably accurate for the entire region although inclusion of smaller communities might reduce average earnings for the region somewhat below those in New England.

The regions used in this study are as follows: *New England*—Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont; *Middle Atlantic*—New Jersey, New York, and Pennsylvania; *Border States*—Delaware, District of Columbia, Kentucky, Maryland, Virginia, and West Virginia; *Southeast*—Alabama, Florida, Georgia, Mississippi, North Carolina, South Carolina, and Tennessee; *Great Lakes*—Illinois, Indiana, Michigan, Minnesota, Ohio, and Wisconsin; *Middle West*—Iowa, Kansas, Missouri, Nebraska, North Dakota, and South Dakota; *Southwest*—Arkansas, Louisiana, Oklahoma, and Texas; *Mountain*—Arizona, Colorado, Idaho, Montana, New Mexico, Utah, and Wyoming; and *Pacific*—California, Nevada, Oregon, and Washington.

<sup>8</sup> Detroit also ranked high among the jobs employing substantial numbers of men.

<sup>9</sup> Pittsburgh had relatively low average hourly earnings although the exclusion of blast furnaces, steel works, and rolling mills should be noted in evaluating the data for this city. The omission of this industry as well as of shipbuilding and airframe manufacture also affects the significance of the wage data for certain other cities, notably, Baltimore and Seattle.

<sup>10</sup> A wage area consists of a central city and such surrounding territory as constitutes a relatively homogeneous area with respect to wage structure. A supplementary table showing data for additional wage areas built around cities of 100,000 or more is available on request.

TABLE 2.—*Straight-Time Average Hourly Earnings*<sup>1</sup> for Selected Office Occupations in Selected Metalworking Industries, 16 Wage Areas, January 1945

Occupation, grade, and sex	Average hourly earnings in—							
	Balti- more, Md.	Bos- ton, Mass.	Buffa- lo, N. Y.	Chi- cago, Ill.	Cleve- land, Ohio	De- troit, Mich.	Los Angeles, Calif.	Mil- waukee, Wis.
<i>Men</i>								
Bookkeepers, hand.....		\$1.07	(?)	\$1.28	\$1.36	\$1.38	\$1.06	\$1.07
Clerks, accounting.....	\$1.16	.96	\$1.00	1.11	1.13	1.24	1.05	1.11
Clerks, general.....		.92	.86	.90	.88	1.04	.92	.86
Clerks, pay roll.....	.92	.96	(?)	1.03	1.06	1.27	(?)	1.01
Office boys.....	.53	.52	.57	.59	.63	.60		.53
<i>Women</i>								
Billing-machine operators.....	.73	.72	.69	.76	.77	.88	.85	.67
Bookkeepers, hand.....	.80	.84	.95	.96	.88	1.12	1.05	.90
Calculating-machine operators:								
Class A.....		.74	.90	.85	.82	.87	.87	.67
Class B.....	.74	.68	.74	.69	.75	.82	.78	.61
Clerks, accounting.....	.78	.71	.84	.79	.82	.88	.88	.69
Clerks, file, class A.....	.75	.68	.69	.78	.82	.80	.80	.65
Clerks, file, class B.....	.60	.54	.57	.62	.66	.70	.68	.54
Clerks, general.....	.64	.61	.66	.70	.69	.82	.80	.60
Clerks, pay roll.....	.77	.70	.76	.79	.80	.91	.89	.68
Clerk-typists.....	.68	.59	.66	.71	.73	.76	.78	.57
Office girls.....	.64	.52	.56	.58	.70	.63	.63	.53
Stenographers, class A.....	.79	.75	.84	.89	.88	.94	.91	.72
Stenographers, class B.....	.68	.65	.69	.76	.80	.82	.85	.62
Switchboard operators.....	.67	.70	.76	.78	.82	.80	.84	.70
Typists, copy, class A.....	.72	.70	.70	.75	.77	.84	(?)	.64
Typists, copy, class B.....	.60	.55	.58	.64	.67	.71	.73	.66
<i>Men</i>								
Bookkeepers, hand.....	\$1.04	\$1.16	\$1.22	\$1.02	\$1.16	\$0.89	\$1.29	\$1.31
Clerks, accounting.....	1.00	.99	1.07	.96	(?)	.90	1.01	1.22
Clerks, general.....	(?)	.79	.74	.61	(?)	.71	(?)	
Clerks, pay roll.....	(?)	1.09	(?)	.88	.93	.71	(?)	(?)
Office boys.....	(?)	.54	.56	.49		.60	(?)	
<i>Women</i>								
Billing-machine operators.....	(?)	.75	.80	.73	.61	.77	.76	(?)
Bookkeepers, hand.....	.80	1.03	1.00	.92	.95	.86	1.04	.95
Calculating-machine operators:								
Class A.....	(?)	.75	.86	.72	(?)	.84	.83	
Class B.....		.71	.74	.63	(?)	.67	.83	.85
Clerks, accounting.....	.66	.76	.86	.75	.70	.71	.88	.86
Clerks, file, class A.....	.72	.74	.80	.70	.67	(?)	.72	(?)
Clerks, file, class B.....	.57	.59	.65	.54	.53	.53	.67	.72
Clerks, general.....	.58	.68	.68	.57	.68	.57	.79	(?)
Clerks, pay roll.....	.70	.73	.82	.76	.69	.66	.84	.88
Clerk-typists.....	.64	.64	.70	.59	.63	.55	.78	.74
Office girls.....	.51	.58	.55	.48	.51	.49	.62	.63
Stenographers, class A.....	.77	.82	.90	.71	.72	.74	.91	.82
Stenographers, class B.....	.61	.73	.80	.66	.65	.66	.82	.78
Switchboard operators.....	.71	.72	.78	.69	(?)	(?)	.78	.73
Typists, copy, class A.....	(?)	.69	.80	.65	(?)	.62	.74	
Typists, copy, class B.....	.55	.60	.68	.58	.63	.57	.75	

<sup>1</sup> Excluding premium pay for overtime and night work.

<sup>2</sup> Insufficient number of workers to justify presentation of an average.

VARIATION WITH SIZE OF COMMUNITY AND SIZE OF ESTABLISHMENT <sup>11</sup>

Average hourly earnings for most office jobs tended to increase with size of community. Most frequently the differential was 10 percent or less in favor of cities of at least 100,000 persons compared with cities of 25,000 to 100,000 population; in turn, the latter held a similar advantage over communities of less than 25,000. Comparing large and small communities directly, the difference in favor of the former amounted to about 14 to 18 percent for one-third of the jobs (including such numerically important jobs as stenographers, accounting clerks, and clerk-typists). Among the large cities, those with more than 500,000 population had higher wage levels than cities of 100,000 to 500,000 inhabitants.

On the whole, size of establishment did not appear to be in an important factor associated with interplant variations in hourly earnings for women in the office jobs studied.<sup>12</sup> Where differences were observed, and these were relatively uncommon, the highest earnings were usually reported by establishments with 251 to 500 workers.

*Vacation, Sick Leave, and Insurance Provisions*

Paid vacations were provided for office workers with at least a year of service in 6 out of 7 metalworking establishments studied. Almost all of the plants allowed either 1 or 2 weeks' vacation with pay, the two periods being almost equally common. Even in the Border States, the Southeast, and Southwest, where the typical establishment was relatively small and formal vacation plans were less widespread than in other regions, at least two-thirds of the establishments had formal vacation plans for office workers. The length of the vacation period was notably longer in New England, where about three-fifths of the plants provided 2 weeks' vacation after a year of service.<sup>13</sup>

TABLE 3.—*Formal Provisions for Paid Vacations and Sick Leave for Office Workers With 1 Year's Service in Selected Metalworking Industries, January 1945*

Length of period	Number of establishments studied	
	Vacation plans	Sick-leave plans
Total establishments with office workers.....	5, 739	5, 739
All provisions.....	4, 873	678
Less than 1 week.....	40	22
1 week.....	2, 412	281
2 weeks.....	2, 368	247
Other.....	53	128
No provisions.....	783	4, 956
Information not available.....	83	105

<sup>11</sup> The classification by size of community was based on the size of the central city in wage areas built around cities of 100,000 or more and in other cases, on the size of the central city in the county. A table showing average hourly earnings by size of community may be obtained from the Bureau.

<sup>12</sup> An analysis of the variation of earnings of men office workers with size of establishment was not made in view of the relatively small proportion employed in the jobs surveyed.

<sup>13</sup> Detail on the number of vacation plans and the periods provided in each region is available on request.

In general, vacations were more widespread in those industries characterized by large establishments, although at least 70 percent of the plants in each industry provided paid vacations for office workers with a year's service. Vacation provisions were reported by at least 80 percent of the establishments in 16 out of the 18 industries; in 9 of these the proportion was at least 90 percent.

Formal provisions for sick leave for office workers with a year of service were reported by only 1 out of 8 metalworking establishments.<sup>14</sup> About two-fifths of these plans provided a week's leave annually and over a third had a 2 weeks' limit. In New England, sick-leave plans were somewhat more common than elsewhere and most typically provided for a 2-week limit. Over three-fourths of the plants manufacturing military tanks and between a fourth and a fifth of the establishments producing radios, machine tool accessories, aircraft engines and parts, and electric generating and distribution equipment had formal sick-leave provisions for their office staffs. In some industries only about 5 percent of the establishments had such arrangements.

Insurance or pension plans, financed entirely or partly by employers, covered office workers in about two-fifths of the establishments studied. About four-fifths of these firms provided life insurance and slightly less than 3 out of every 5 had health insurance plans. Pacific, Southeastern, and Southwestern establishments provided insurance or pensions less frequently than did plants in the other regions. Such arrangements were least common in nonferrous foundries, sheet-metal establishments, electroplating and tool-and-die jobbing shops, and fabricated structural-steel establishments; only a third or a fourth of these provided insurance plans. In contrast, half or more of the establishments engaged in producing forgings, aircraft engines and parts, electric generating and distribution equipment, motor vehicles, tanks, small arms, machinery, machine tools, and radios had insurance or pension plans.

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<sup>14</sup> Informal arrangements, whereby, on occasion at the discretion of their supervisors, workers may receive paid vacations or be paid their salaries regardless of illness, were not studied.