

### Conclusion

The employment of the techniques described has made possible a study of the economic security of old-age and survivors insurance beneficiaries interviewed in 1941-42. The findings will be published in a later issue of the *BULLETIN*. The techniques themselves are not new. Several studies have been made in which comparison of the level of living of families of varying composition has been made possible by the use of scales indicating the relative consumption requirements of persons of differing age, sex, and activity. So far as is known to the authors, however, at least some of the scales in such studies have been far less detailed. Miscellaneous expenditures generally have been prorated merely on a per capita basis. The scale for adjusting the amount of the rent allowance for families of varying size is probably one of many efforts in an area about which little has been published. As is the case with all research of this nature, however, the resulting scale is only tentatively

offered until a better one can be found to take its place.

Family income has likewise been compared with a standard budget to evaluate the adequacy of income, particularly in connection with minimum wage legislation and other wage negotiations. The standard budgets used in such cases, however, were for families of a given composition, such as an employed man, his wife at home, a girl aged 8, and a boy aged 13. To analyze the security of the 3,529 groups of old-age and survivors insurance beneficiaries whose resources were being evaluated, hundreds of different budgets were quickly constructed.

Thus by combining two tested procedures, incomes of families of varied composition have been compared with maintenance-level budgets constructed especially for each family. The method used is practical at any time, although advances in knowledge may impel adoption of different scales or a different basic budget. It should be borne in mind that the scales adopted for modifying the basic

budget in accordance with family composition should be appropriate to the level of living described by the budget.

New information on consumption habits or scientifically determined requirements may become available which will suggest that relationships different from those used for this analysis exist between the costs of requirements of one type of individual and those of another at a maintenance level. Moreover, information of this sort already available is being utilized in making new standard budgets which could be used as norms. Such changes would not affect the usefulness of the method described. If the budget has not been priced in the cities in which the families to be studied live, one or two steps not required in the present analysis would be necessary. The content of the budget might need adjusting to take into consideration differences in climate or market availability, and an index of intercity differences in the cost of living would have to be employed.

## Age Distribution of Workers in Industries Under Old-Age and Survivors Insurance

By George H. Trafton \*

IN RECENT NEGOTIATIONS with management, organized labor has increasingly stressed proposals for health, welfare, and retirement funds. By 1946, provisions of this kind were already in effect in a few industries, and in that year the creation of an industry-wide fund became a critical issue in the labor-management dispute in the coal industry. The agreement signed in May by the Secretary of the Interior and the president of the United Mine Workers provides for both a welfare and retirement fund and a medical and hospital fund for the entire bituminous industry. A similar agreement, setting up a health and welfare fund for workers in the anthracite-mining industry, was signed in June. Labor organizations in other industries, including steel, have indicated that they will soon ask that similar funds be established for the protection of their members.

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In planning the benefit provisions and estimating the probable disbursements of an industry health and retirement fund, the age distribution of the workers employed in the industry will need to be considered. Some indication of the extent of industry differences in age composition is provided by tabulations of sample data derived from the wage records maintained by the Social Security Administration under old-age and survivors insurance. The most recent year for which such tabulated data are now available is 1944.

The industry data for 1944 have been obtained from a 1-percent sample of all workers receiving wages in that year in employments covered by the insurance system.<sup>1</sup> Each worker in the sample was classified in the

<sup>1</sup> Covered employment includes any services performed by a worker for an employer within the United States, including Alaska and Hawaii, or on or in connection with an American vessel, with

industry group, or one of the industry groups, in which he worked in his last calendar quarter with wage credits in 1944, as indicated by employer reports of taxable wage payments. Industry groups were determined on the basis of industry information obtained from employers between the fall of 1942 and the spring of 1945. In the tabulations, each worker has been classified in only one industry group even though he may have worked in more than one during the year. Usually, the industry group indicated represents the worker's last covered employment in 1944.

The basic punch cards contain industry codes permitting a much more detailed grouping by industry than that shown in the tables accompany-

certain exceptions. The major exclusions are self-employment, agricultural labor, domestic service in a private home, employment by the Federal Government or a State or local government, railroad employment, employment in certain types of nonprofit organizations, family employment, and casual employment not in the course of the employer's trade or business.

Table 1.—Percentage distribution of men with wage credits in 1944 under old-age and survivors insurance, by age<sup>1</sup> group for each industry

Industrial classification <sup>2</sup>	Number <sup>3</sup> (in thousands)	Percentage distribution												Median age	Third-quartile age
		Total	Under 20	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65 and over		
Total.....	28,072	100.0	12.8	7.0	9.7	11.8	11.9	11.5	9.9	8.7	7.1	5.1	4.5	38.6	50.2
Mining.....	1,043	100.0	5.3	6.5	10.1	13.3	13.5	12.3	11.1	10.5	8.8	5.5	3.2	40.5	51.4
10 Metal mining.....	127	100.0	4.8	6.4	12.0	14.7	14.1	12.2	10.5	9.4	8.7	4.9	2.4	39.3	50.2
11 Anthracite mining.....	92	100.0	1.8	1.7	7.7	10.5	15.2	11.1	10.5	16.1	12.8	7.9	4.7	46.0	55.2
12 Bituminous mining.....	489	100.0	3.8	6.7	10.2	13.6	12.8	11.8	11.2	10.6	10.0	5.8	3.4	41.2	52.3
13 Crude-petroleum and natural-gas production.....	240	100.0	8.7	7.2	10.1	14.1	13.8	14.0	11.3	9.3	5.6	3.9	2.0	38.6	48.2
14 Nonmetallic mining and quarrying.....	95	100.0	8.8	8.3	9.1	10.9	14.0	11.6	10.8	9.3	6.8	6.1	4.3	39.6	50.8
Contract construction.....	1,536	100.0	8.4	6.4	8.5	10.7	12.7	13.1	11.4	10.2	8.5	5.8	4.3	41.3	51.9
15 Building construction, general contractors.....	485	100.0	8.1	6.1	6.9	9.9	11.6	11.3	11.5	12.3	10.1	7.2	5.0	43.3	53.9
16 General contractors, other than building.....	424	100.0	11.0	8.3	10.1	12.5	12.8	13.2	10.3	8.2	6.2	4.1	3.3	38.2	48.5
17 Construction—special-trade contractors.....	627	100.0	6.9	5.2	8.6	10.2	13.5	14.4	12.2	9.9	8.9	5.9	4.5	42.0	52.1
Manufacturing.....	13,921	100.0	10.0	7.5	10.9	12.8	12.4	11.4	9.8	8.8	7.2	5.1	4.2	38.6	50.2
19 Ordnance and accessories.....	349	100.0	6.3	8.6	13.3	15.3	12.6	11.8	9.6	9.3	6.1	4.5	2.7	37.6	48.7
20 Food and kindred products.....	1,555	100.0	18.3	10.0	10.1	10.8	11.1	10.0	8.3	7.2	5.8	4.4	4.0	35.4	47.8
21 Tobacco manufacturers.....	41	100.0	13.4	5.5	7.3	8.3	10.3	12.8	9.1	11.1	10.1	6.3	5.8	42.0	53.8
22 Textile-mill products.....	773	100.0	11.7	6.7	8.7	11.2	11.6	11.0	9.4	8.9	7.9	6.5	6.3	40.0	52.5
23 Apparel and other finished products made from fabrics and similar materials.....	324	100.0	15.2	5.2	5.5	7.8	8.8	9.3	10.8	11.3	11.1	8.6	6.4	44.1	55.5
24 Lumber and timber basic products.....	772	100.0	11.7	9.1	10.2	11.6	10.9	11.0	9.1	8.4	7.7	5.8	4.5	38.4	50.8
25 Furniture and finished lumber products.....	404	100.0	13.3	6.9	7.5	10.0	10.5	10.4	8.8	10.3	8.4	6.9	7.0	40.9	53.7
26 Paper and allied products.....	327	100.0	14.3	6.3	9.0	10.5	13.3	11.3	9.4	8.6	6.7	5.2	5.5	38.7	50.5
27 Printing, publishing, and allied industries.....	420	100.0	17.6	3.7	5.3	9.6	12.5	12.2	10.4	9.2	7.3	5.5	6.7	40.5	52.0
28 Chemicals and allied products.....	688	100.0	7.1	7.1	11.0	14.3	13.3	12.3	10.5	9.1	7.1	4.7	3.6	39.0	49.7
29 Products of petroleum and coal.....	220	100.0	6.4	5.8	9.3	13.3	14.1	14.9	12.8	10.3	6.5	4.3	2.0	40.3	49.3
30 Rubber products.....	184	100.0	10.4	7.5	12.1	12.6	12.8	11.7	9.4	8.7	7.3	4.5	3.1	37.9	49.2
31 Leather and leather products.....	198	100.0	13.4	4.9	6.6	8.3	10.5	10.1	10.5	11.0	9.0	8.6	7.1	43.1	54.9
32 Stone, clay, and glass products.....	370	100.0	13.2	7.0	9.0	10.7	10.0	11.3	9.9	9.3	8.0	6.2	5.3	40.1	52.1
33 Iron and steel and their products.....	1,635	100.0	7.5	6.2	10.5	12.8	12.8	11.9	10.2	10.0	8.3	5.7	4.0	40.1	51.5
34 Transportation equipment (except automobiles).....	2,661	100.0	5.6	8.4	14.6	16.0	13.6	12.0	10.0	7.7	5.7	3.8	2.6	37.0	47.4
35 Nonferrous metals and their products.....	444	100.0	7.4	7.5	11.6	13.3	13.1	11.2	10.1	9.6	7.2	4.8	4.1	38.9	50.4
36 Electrical machinery.....	664	100.0	9.3	7.5	12.1	14.6	13.6	11.3	9.2	8.4	7.2	3.9	3.0	37.4	48.6
37 Machinery (except electrical).....	1,240	100.0	7.6	6.7	11.1	12.7	12.5	11.5	9.8	9.2	8.0	5.8	5.0	39.8	51.6
38 Automobiles and automobile equipment.....	322	100.0	5.6	6.5	10.7	13.7	13.9	13.2	11.4	10.2	7.5	4.7	2.8	39.9	50.1
39 Miscellaneous manufacturing industries.....	330	100.0	11.6	7.2	9.9	12.1	11.7	10.6	10.2	8.3	7.8	5.6	4.9	38.9	51.0
Transportation, communication, and other public utilities.....	1,954	100.0	8.5	9.8	11.7	13.4	13.7	12.9	10.0	7.8	5.7	3.7	2.9	37.4	47.5
41 Local railways and bus lines.....	166	100.0	2.9	4.6	10.3	14.3	15.9	13.1	11.9	9.6	7.5	4.7	6.8	41.4	51.9
42 Trucking and warehousing for hire.....	619	100.0	11.6	10.5	13.7	15.4	13.5	11.9	8.8	5.8	4.1	2.9	1.9	34.6	44.4
43 Other transportation, except water transportation.....	240	100.0	4.6	10.6	16.1	17.0	15.8	13.5	8.6	6.4	3.9	2.1	1.3	35.5	44.0
44 Water transportation.....	274	100.0	15.3	19.6	13.4	11.9	9.4	8.4	7.2	6.0	4.0	2.8	2.1	30.7	43.3
45 Services allied to transportation, not elsewhere classified.....	202	100.0	8.1	11.7	12.2	13.3	11.9	12.4	9.7	7.6	5.7	4.1	3.4	37.0	47.8
46 Communication: telephone, telegraph, and related services.....	123	100.0	4.6	3.9	7.0	7.8	18.1	18.5	13.9	10.7	8.0	5.4	2.0	42.3	50.5
48 Utilities: electric and gas.....	306	100.0	4.1	3.3	5.8	10.1	15.7	16.5	13.4	12.2	9.1	5.7	4.0	43.3	52.5
Other.....	24	100.0	5.6	2.6	5.6	7.4	8.2	14.3	14.3	11.7	13.4	8.2	8.7	47.3	56.9
Wholesale and retail trade.....	5,803	100.0	21.1	6.0	7.8	10.1	10.5	10.8	9.4	8.0	6.6	4.8	4.8	37.4	49.6
50 Full-service and limited-function wholesalers.....	1,006	100.0	14.6	6.5	9.3	10.8	11.5	11.7	10.0	8.6	7.0	5.1	4.8	38.8	50.3
51 Wholesale distributors, other than full-service and limited-function wholesalers.....	923	100.0	9.2	6.4	9.2	12.9	13.2	13.3	11.0	9.4	7.2	4.5	3.8	39.7	49.9
52 Wholesale and retail trade combined, not elsewhere classified.....	307	100.0	12.0	6.7	7.4	9.8	10.4	11.9	9.4	8.9	8.7	7.3	7.5	41.6	54.1
53 Retail general merchandise.....	455	100.0	33.5	5.4	5.5	6.8	8.9	8.8	7.1	5.9	6.2	5.6	6.2	34.1	49.2
54 Retail food and liquor stores.....	827	100.0	37.0	5.0	6.3	8.6	8.5	8.3	7.8	6.2	4.8	3.6	3.8	31.0	45.8
55 Retail automotive.....	330	100.0	15.8	7.6	11.0	15.3	12.5	12.8	9.5	6.9	3.7	2.6	2.4	35.2	45.0
56 Retail apparel and accessories.....	222	100.0	29.1	4.6	5.4	7.6	9.5	8.4	7.5	8.6	7.1	6.0	6.3	36.8	51.7
57 Retail trade, not elsewhere classified.....	798	100.0	24.4	5.6	7.0	9.5	9.6	10.2	9.4	7.6	6.5	4.7	5.5	36.8	49.6
58 Eating and drinking places.....	750	100.0	16.7	5.3	6.5	8.4	9.5	11.2	11.2	10.1	8.9	6.3	5.9	41.6	53.0
59 Retail filling stations.....	185	100.0	32.1	9.9	12.5	10.6	9.9	8.4	5.2	4.1	2.9	2.3	2.2	28.2	40.0
Finance, insurance, and real estate.....	821	100.0	4.4	3.0	4.3	8.1	11.8	13.7	13.4	11.9	10.4	8.3	10.7	46.7	57.1
60 Banks and trust companies.....	165	100.0	3.6	1.7	3.8	6.6	12.2	15.2	14.0	11.8	9.5	7.9	13.7	47.5	58.2
63 Insurance carriers.....	201	100.0	2.7	3.3	4.9	12.8	16.6	15.5	14.7	11.7	8.5	4.9	4.4	43.1	51.9
64 Insurance agents, brokers, and services.....	30	100.0	6.1	1.7	5.4	10.8	12.9	15.3	9.8	11.2	9.2	8.8	8.8	44.3	55.9
65 Real estate.....	318	100.0	5.5	2.9	3.6	5.4	7.5	11.8	12.6	11.2	12.5	11.2	13.7	50.2	60.0
Other.....	107	100.0	5.0	4.5	5.8	8.5	13.7	13.6	13.1	9.6	9.8	6.7	9.7	44.6	55.6
Service industries.....	2,160	100.0	23.0	5.8	7.2	9.6	9.8	10.1	9.2	7.7	6.8	4.9	5.7	37.2	50.1
70 Hotels, rooming houses, camps, and other lodging places.....	305	100.0	18.5	5.8	5.3	6.2	7.3	9.7	9.4	9.6	10.1	8.0	10.0	43.5	56.6
72 Personal services.....	408	100.0	18.0	5.6	7.8	10.6	10.6	11.6	10.0	8.3	6.8	5.1	5.7	38.8	50.5
73 Business services, not elsewhere classified.....	266	100.0	12.7	6.4	8.7	12.1	12.9	11.5	9.9	8.4	6.8	5.2	5.4	38.9	50.5
75 Automobile repair services and garages.....	174	100.0	18.0	8.7	11.6	15.3	10.8	12.0	9.3	5.2	4.0	2.3	2.8	33.8	44.4
76 Miscellaneous repair services and hand trades.....	105	100.0	14.9	7.6	10.0	12.5	12.8	11.0	8.5	7.5	6.4	4.7	4.1	36.9	48.6
78 Motion pictures.....	199	100.0	39.6	4.1	5.6	7.2	8.1	7.4	7.6	7.0	5.5	3.5	4.3	30.5	47.0
79 Amusement and recreation and related services, not elsewhere classified.....	355	100.0	49.0	4.4	4.7	5.5	5.7	6.9	6.8	5.5	4.5	3.1	3.6	21.1	44.0
80 Medical and other health services.....	42	100.0	12.5	5.9	6.1	11.3	11.3	10.1	11.1	7.6	9.8	7.6	6.6	41.5	54.4
86 Nonprofit membership organizations and institutions.....	164	100.0	7.0	4.6	5.9	9.7	12.1	10.4	12.4	11.4	11.2	6.0	9.3	45.2	55.7
Other.....	142	100.0	12.4	8.3	9.5	12.8	13.6	12.3	9.7	6.7	5.4	5.4	4.0	37.6	48.2
All others.....	834	100.0	13.9	8.6	11.5	13.2	12.2	10.4	8.9	7.1	5.9	4.7	3.7	36.2	48.0

<sup>1</sup> Age at birthday in 1944.<sup>2</sup> Workers are classified by the industry, or one of the industries, in which they worked in their last quarter with wage credits in 1944.<sup>3</sup> Estimated totals based on 1-percent sample data.<sup>4</sup> Represents fewer than 100 workers in the sample. Sampling variation may be large where number in sample is relatively small.

ing this article.<sup>3</sup> Moreover, they make available annual industry data showing not only number of workers but also amount of taxable wages classified by number of calendar quarters in covered employment and by annual wage-credit interval. From available punch cards it is also possible to tabulate data on number of workers in each industry by number of calendar years and quarters worked in covered employment since 1936, the cumulative amount of taxable wages received, and insurance status under the old-age and survivors insurance system. These data can be cross-classified, not only by age and industry, but also by sex, race, and State; and they can be still further classified to show the number of workers employed by only one employer, in only one industry, and in only one State. The detail with which significant break-downs can be made is limited chiefly by the size of the sample. The present article is confined to a discussion of the age distribution of workers classified by major industry group.

The data in tables 1 and 2 include persons whose period of covered employment was brief as well as those who received taxable wages in all 4 calendar quarters. For example, school children who worked only in their summer vacation, women whose employment was confined to the Christmas or Easter season, and persons who usually work in noncovered occupations but who had seasonal work in covered employment are all represented in addition to persons who regularly had covered jobs. It has been possible, however, to segregate the workers who received wage credits in all 4 quarters of the year; for the most part, they were full-time workers in covered employment. The 4-quarter workers, of course, were classified in an industry in which they worked in the fourth quarter of the year.

<sup>3</sup>In the regular annual tabulations from which the present data have been obtained, workers have been classified according to the first 2 digits of a 4-digit industry code punched in the tabulating cards. For a detailed description of the industry classifications, see Social Security Board, *Industrial Classification Code: Vol. I, Description of Industries, 1942*.

The age distributions shown by the present data are substantially affected by the large proportion of the population aged 20-35 that was in the armed forces and the unusually large number of older men and middle-aged and older women who were working in covered employment in 1944. As a result of this wartime situation the proportion both of men and of women in age groups from 20 to 34 was considerably smaller in 1944 than in 1940, while the proportions under age 20 and in age groups over 35 were comparatively large. The greatest increase was in the relative number under age 20. In 1940, only 7 percent of the men and 12 percent of the women were under 20; in 1944, the corresponding proportions were 13 and 18 percent. In the older groups the increases were largest in the ages 50-64 for men and 45-59 for women. For men the proportion aged 65 and over was also substantially larger—4.5 percent as against 2.5 percent; the corresponding proportions for women were 1.0 percent and 0.7 percent.

Another factor to be considered in analyzing these data is the large wartime expansion of some industries and the contraction of others. The age distribution of workers in an industry that has expanded rapidly is substantially affected by the age composition of the newly recruited employees; the proportion of workers in the younger age groups is likely to be unusually large. On the other hand, an industry that has not expanded or has actually contracted is likely to have employees with an unusually high average age. Since the end of the war the shifting of workers from war production to peacetime employment probably has resulted in important changes in the age distribution in some industries. These effects of expansion and contraction are also significant in peacetime, and they have important consequences for retirement systems limited to single industries.

Because of the large difference between the age distributions of men and women in covered employment, the two sex groups will be discussed separately in the following analysis, which deals first with broad industry divisions and then with the major industry groups within each division.

## Broad Industry Divisions

In the seven broad industry divisions, the men who received taxable wages in 1944 in finance, insurance, and real estate were oldest as a group (table 1). Half of them were over 47 years of age. Next oldest were the men working in mining and in contract construction; in each of these industry divisions the median age was 41. The industry divisions with the youngest median age for men—37 years—were transportation, communication, and other public utilities; wholesale and retail trade; and the service industries.

The extent to which workers in the various industry divisions were concentrated in the older age groups is indicated by the third-quartile age—the age exceeded by exactly one-fourth of the workers in the industry. Twenty-five percent of all men employed in finance, insurance, and real estate in 1944 were over age 57; the corresponding age for contract construction was 52 years and for the mining industries, 51 years. The youngest third-quartile age for men in any of the industry divisions was 48 years, shown for transportation, communication, and other public utilities.

When the major industry divisions are arrayed according to the proportion of their male employees aged 65 and over in 1944, the highest in rank are finance, insurance, and real estate with 11 percent, and the service industries with 5.7 percent. Lowest in rank are transportation, communication, and other public utilities (2.9 percent) and mining (3.2 percent). In the proportion of men at ages 55-64, however, the mining industries (14 percent) and contract construction (14 percent) rank second only to finance, insurance, and real estate (19 percent). Men in this age group were relatively fewest in transportation, communication, and other public utilities (9.4 percent) and wholesale and retail trade (11 percent). There were notably large proportions of boys under age 20 in the service industries (23 percent) and in wholesale and retail trade (21 percent); manufacturing industries had the next highest proportion (10 percent).

Half of all men with wage credits in 1944 were employed in the manu-

facturing industries. The median age of men in that industry division was 39 years; exactly a fourth of them were over age 50. Only 4.2 percent were aged 65 and over, while 12 percent were aged 55-64.

The women in each industry division in 1944 were, as would be expected, younger than the men (table 2). Women employed in the service industries had the oldest median age

in any industry division (31 years). Next oldest (30 years) were those in the manufacturing industries, in finance, insurance, and real estate, and in contract construction. The youngest median age for women (27 years) is shown for wholesale and retail trade and for mining. The third-quartile age of women ranged from 43 years in the service industries to 37 years in the mining industries.

Women aged 65 and over were relatively most numerous in the service industries (1.6 percent) and in finance, insurance, and real estate (1.5 percent), and were relatively fewest in transportation, communication, and other public utilities (0.4 percent). For the age group 55-64 the proportion was also small, ranging from 6.6 percent in the service industries to 2.6 percent in mining. On the

Table 2.—Percentage distribution of women with wage credits in 1944 under old-age and survivors insurance, by age<sup>1</sup> group for each industry

Industrial classification <sup>2</sup>	Number <sup>3</sup> (in thousands)	Percentage distribution													Median age	Third-quartile age
		Total	Under 20	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65 and over			
Total.....	18,224	100.0	17.9	20.4	13.9	11.5	10.4	8.6	6.6	4.7	3.1	1.8	1.0	29.2	40.5	
Mining.....	47	100.0	13.4	27.9	17.5	11.3	10.0	8.7	4.1	3.9	1.5	1.1	1.6	27.5	37.4	
Contract construction.....	100	100.0	11.4	21.7	16.0	14.2	11.8	8.3	7.3	4.0	2.9	1.6	1.8	30.3	40.0	
Manufacturing.....	8,107	100.0	13.0	22.0	15.5	12.5	11.0	9.1	6.9	4.7	2.9	1.6	.8	29.8	40.5	
19.....	252	100.0	10.8	24.3	17.2	12.8	12.0	9.1	6.7	4.1	1.9	1.8	1.3	29.3	39.1	
20.....	916	100.0	18.8	17.7	12.2	11.1	10.2	8.8	7.1	6.3	4.1	2.4	1.3	30.6	42.8	
21.....	91	100.0	8.4	17.6	15.0	14.2	14.1	10.8	9.1	5.4	3.3	1.2	1.0	33.2	42.7	
22.....	832	100.0	12.3	17.7	14.1	12.9	13.1	10.0	8.1	5.4	3.3	2.0	1.0	32.3	42.5	
23.....	1,086	100.0	11.3	16.1	12.8	12.5	11.4	10.7	9.4	6.7	4.9	2.9	1.3	34.0	45.1	
24.....	68	100.0	15.1	19.4	17.1	16.9	11.1	9.3	4.1	3.4	1.5	1.4	1.6	29.6	37.9	
25.....	186	100.0	15.1	23.3	14.3	11.5	11.6	9.3	6.3	4.2	2.6	1.2	1.6	29.0	39.6	
26.....	199	100.0	17.4	21.7	14.1	11.3	10.2	10.1	6.5	4.3	2.6	1.0	1.8	28.9	40.2	
27.....	279	100.0	16.6	19.5	12.3	9.5	11.4	10.5	7.2	6.2	3.3	1.9	1.6	30.9	42.7	
28.....	317	100.0	12.0	23.0	17.3	12.7	10.7	9.8	6.3	3.6	2.2	1.5	1.8	29.3	39.6	
29.....	138	100.0	13.0	23.2	17.5	12.9	10.8	8.2	4.6	4.0	2.2	1.1	1.4	29.0	38.9	
30.....	250	100.0	15.3	17.3	11.7	11.5	10.6	10.8	8.8	5.8	4.3	2.4	1.4	32.4	43.9	
31.....	147	100.0	17.3	24.0	14.5	12.3	10.1	8.2	5.7	3.7	2.4	1.0	1.7	28.0	38.4	
32.....	510	100.0	11.6	25.6	17.3	13.3	10.9	8.3	6.3	3.6	1.8	1.7	1.5	28.7	38.3	
33.....	1,065	100.0	8.7	27.2	19.3	14.6	11.1	8.0	5.6	3.4	1.5	1.6	1.2	28.7	37.4	
34.....	169	100.0	11.4	26.3	16.5	12.6	11.0	9.0	5.9	3.6	1.6	1.6	1.4	28.7	38.7	
35.....	680	100.0	14.1	26.9	17.2	12.0	9.8	8.2	5.2	3.3	2.0	1.1	1.3	27.6	37.5	
36.....	411	100.0	11.9	26.5	18.0	12.5	10.6	7.8	6.1	3.5	1.9	1.8	1.3	28.2	37.9	
37.....	130	100.0	9.9	26.8	19.5	13.3	11.1	8.5	4.6	2.7	1.8	1.6	1.2	28.4	37.5	
Other.....	381	100.0	14.6	24.1	16.5	11.5	9.3	8.2	6.3	4.7	2.6	1.6	1.8	28.5	39.5	
Transportation, communication, and other public utilities.....	653	100.0	18.2	25.3	12.9	10.3	11.4	8.5	5.8	3.6	2.4	1.3	1.4	27.6	38.7	
42.....	69	100.0	14.8	23.3	15.9	11.8	10.9	8.9	5.7	3.5	3.2	1.7	1.3	28.7	39.2	
43.....	55	100.0	12.5	27.3	19.3	12.9	11.2	7.5	3.7	3.2	1.5	1.7	1.2	27.7	36.3	
46.....	388	100.0	21.1	25.3	10.6	9.3	11.9	8.9	5.8	3.7	2.0	1.9	1.4	26.7	38.6	
48.....	73	100.0	14.4	26.5	14.1	11.7	10.4	7.8	4.4	3.5	4.0	1.9	1.3	28.2	39.0	
Other.....	68	100.0	13.4	24.0	16.4	11.1	10.5	7.6	7.4	4.0	2.6	2.4	1.6	28.8	39.9	
Wholesale and retail trade.....	5,826	100.0	26.2	18.1	12.0	10.3	9.2	7.7	6.0	4.6	3.1	1.9	1.0	27.4	39.6	
50.....	514	100.0	16.2	21.3	14.3	12.2	11.6	9.1	5.8	4.3	3.0	1.3	1.7	29.4	39.7	
51.....	428	100.0	13.7	24.4	16.8	11.9	10.7	7.9	6.2	4.3	2.1	1.2	1.8	28.5	38.8	
52.....	63	100.0	18.9	20.7	16.4	9.0	9.2	9.0	6.4	4.3	3.8	1.6	1.8	28.2	40.5	
53.....	1,810	100.0	37.2	16.5	9.4	7.9	7.1	6.3	5.4	4.2	3.0	1.9	1.1	23.9	37.8	
54.....	564	100.0	27.4	16.7	11.8	11.8	9.9	7.9	6.0	4.0	2.6	1.3	1.6	27.5	38.7	
55.....	54	100.0	15.0	24.1	15.9	11.9	10.8	8.5	6.6	4.2	1.8	1.8	1.5	25.5	38.8	
56.....	559	100.0	22.6	14.8	9.7	9.6	9.5	9.8	8.3	6.6	4.9	2.6	1.7	31.5	44.5	
57.....	594	100.0	28.1	18.8	11.6	9.9	9.1	7.8	5.1	3.9	2.7	1.9	1.2	26.4	38.7	
58.....	1,221	100.0	19.4	18.4	14.0	12.2	10.4	7.8	6.1	5.1	3.2	2.2	1.0	29.3	40.3	
59.....	19	100.0	14.8	28.4	15.8	13.7	12.0	4.4	4.9	1.6	2.7	1.6	0	27.2	35.9	
Finance, insurance, and real estate.....	847	100.0	15.7	22.5	12.9	9.7	10.3	9.2	6.9	5.6	3.5	2.3	1.5	29.6	42.1	
60.....	218	100.0	18.8	28.4	12.5	8.3	9.5	8.3	5.7	4.2	2.3	1.4	1.6	26.1	38.7	
63.....	225	100.0	20.1	26.0	15.0	10.0	8.7	7.4	5.2	4.2	1.7	1.0	1.7	26.3	37.2	
64.....	73	100.0	17.1	22.8	14.6	10.7	11.0	11.4	4.6	3.5	1.7	1.3	1.4	28.5	39.5	
65.....	192	100.0	7.8	10.1	10.0	9.7	11.7	11.7	11.5	10.7	7.8	5.5	3.6	40.3	51.2	
Other.....	139	100.0	13.5	24.3	13.3	10.6	12.2	9.2	6.5	4.4	3.0	1.8	1.3	29.6	40.6	
Service industries.....	2,172	100.0	16.0	17.6	13.7	12.0	10.5	9.2	7.4	5.4	4.2	2.4	1.6	31.1	42.8	
70.....	434	100.0	14.1	14.4	11.8	10.7	9.9	11.0	8.8	6.6	6.5	3.6	2.5	34.5	46.7	
72.....	785	100.0	16.7	17.2	14.6	13.2	10.3	8.6	7.1	5.0	3.7	2.1	1.3	30.6	41.7	
73.....	204	100.0	15.1	21.8	14.9	11.5	11.3	10.3	5.6	4.6	2.8	1.3	1.8	29.4	40.1	
78.....	132	100.0	39.8	16.2	9.9	7.8	7.2	6.3	4.4	3.6	1.9	1.7	1.2	23.2	35.9	
79.....	87	100.0	19.5	15.0	12.8	13.2	10.0	7.8	8.3	5.9	3.5	3.0	1.1	31.0	42.9	
80.....	246	100.0	9.4	20.1	14.0	12.3	12.5	8.2	8.2	5.9	4.9	2.5	2.0	32.6	44.1	
86.....	92	100.0	6.2	15.7	13.3	13.7	11.9	11.7	10.0	6.3	4.7	3.3	2.1	35.5	46.2	
Other.....	192	100.0	13.1	22.4	15.7	11.0	10.5	9.7	7.0	5.0	3.2	1.5	1.0	29.6	41.2	
All others.....	472	100.0	15.8	23.0	14.1	11.6	10.9	8.3	6.6	4.3	2.7	1.7	1.9	29.0	39.9	

<sup>1</sup> Age at birthday in 1944.

<sup>2</sup> Workers are classified by the industry, or one of the industries, in which they worked in their last quarter with wage credits in 1944.

<sup>3</sup> Estimated totals based on 1-percent sample data.

<sup>4</sup> Represents fewer than 100 workers in the sample. Sampling variation may be large where number in sample is relatively small.

other hand, the relative number of workers under age 20 was much larger for women than for men. Of the women working in wholesale and retail trade, 26 percent were under age 20; in transportation, communication, and other public utilities, 18 percent; and in finance, insurance, and real estate and also in the service industries, 16 percent.

In the manufacturing industries, which accounted for 45 percent of all women in covered employment in 1944, the median age of women was 30 years; and exactly three-fourths of all women in that industry division were under age 41. Only 0.8 percent were aged 65 and over, and 4.5 percent were aged 55-64. Thirteen percent were under age 20.

In every industry division and for each sex, workers with wage credits in all 4 quarters of 1944 were on the average somewhat older than all workers receiving taxable wages during the year. In the service industries the median age of men 4-quarter workers was 5 years older than that of all men with wage credits in those industries in 1944. In finance, insurance, and real estate the corresponding difference in median age was only 1 year, but in most of the other industry divisions it was 2 or 3 years. In manufacturing the median age of men 4-quarter workers was 41 years, as compared with 39 years for all men with wage credits in that industry division.

The third-quartile age of men was also higher for the 4-quarter workers than for all men in each industry division except finance, insurance, and real estate, but the difference was smaller than in the case of the median ages. The largest difference is shown for the service industries, where the third-quartile age of men 4-quarter workers was 53 years as against 50 years for all men. In none of the other industry divisions was the difference more than 2 years.

For women, the median age of 4-quarter workers, which ranged from 34 years in the service industries to 29 years in mining, was more than 2 years older than the median age of all women workers only in wholesale and retail trade (31 years as against 27) and in the service industries (34 years as against 31). The third-

quartile age of women 4-quarter workers ranged from 45 years in the service industries to 40 years in mining and in transportation, communication, and other public utilities. Only in contract construction and in wholesale and retail trade was the third-quartile age of women 4-quarter workers more than 2 years older than that of all women workers.

The difference in median age between 4-quarter workers and all workers is largely accounted for by the much smaller proportion of young persons among the 4-quarter workers. In wholesale and retail trade, only 9.9 percent of the men 4-quarter workers and 17 percent of the women 4-quarter workers were under age 20, as compared with 21 and 26 percent, respectively, of all men and women with wage credits in this industry division in 1944. In the seven major industry divisions the proportions of all workers and of 4-quarter workers who were under age 20 in 1944 were as follows:

Industry division	Men		Women	
	All workers	4-quarter workers	All workers	4-quarter workers
Total.....	12.8	5.5	17.9	12.0
Mining.....	5.3	2.0	13.4	7.2
Contract construction....	8.4	3.4	11.4	7.8
Manufacturing.....	10.0	4.4	13.0	9.6
Transportation, communication, and other public utilities.....	8.5	3.9	18.2	14.1
Wholesale and retail trade.....	21.1	9.9	26.2	17.1
Finance, insurance, and real estate.....	4.4	1.5	15.7	12.3
Service industries.....	23.0	9.3	16.0	9.1

These differences are, of course, explained chiefly by the large number of boys and girls who work only during school vacations or who enter the labor market as regular workers after the school term has ended in June. For men, the differences may also reflect the entrance of young men into the armed forces.

At the other end of the age distribution, the proportion of men aged 65 and over was also slightly smaller among 4-quarter workers than among all men, except in the service industries and in wholesale and retail trade, where it was slightly larger. A somewhat similar situation is shown for women. For both men and women,

the proportion aged 55-64 was larger for the 4-quarter workers than for all workers in each industry division.

In general, the data for the seven broad industry divisions show that men employed in 1944 in finance, insurance, and real estate were older—with respect to the proportion over age 65, the proportion approaching that age, and the proportion under age 20—than in any other industry division. The service industries and wholesale and retail trade also had comparatively large proportions of men over age 65, but the relative numbers under age 20 were much higher in these industry divisions than in any others. Mining and contract construction were alike in the fact that, while the proportion of men aged 65 and over was not exceptionally large, the proportion in the age group 55-64 was higher than in most other industry divisions. Relatively fewer men were under age 20 in mining, however, than in contract construction. In transportation, communication, and other public utilities, there was a relatively heavy concentration of men in ages 20-44. In the manufacturing division, except for a somewhat smaller proportion under age 20, the age distribution of men was similar to that for all men with wage credits in 1944.

Women workers in 1944 were heavily concentrated in the ages under 25 in every industry division, particularly in wholesale and retail trade and in transportation, communication, and other public utilities. In no industry division was the proportion of women aged 50 and over larger than 14 percent; by contrast, in no industry division were fewer than 20 percent of the men over that age. The highest proportions of women over age 50 were shown for the service industries (14 percent) and for finance, insurance, and real estate (13 percent). In transportation, communication, and other public utilities, as well as in wholesale and retail trade, the percentages of women under age 20 were relatively high.

### Major Industry Groups

When the broad industry divisions are broken down into major industry groups, however, wide differences in

age composition are found in each division. An even more detailed classification by industry would undoubtedly reveal still further variations within each industry group. Nevertheless, the available data suggest the variety of situations that will be faced if industry health, welfare, and retirement plans are widely adopted. Typical of these differences are the age distributions shown in charts 1 and 2 for 4-quarter workers in a few selected industries.

**Men Workers**

**Mining.**—In mining in 1944, men working in the anthracite industry had the oldest average age; half of them were over age 46, and a fourth were over age 55. Next oldest as a group were men in the bituminous industry; their median age was 41 years and their third-quartile age, 52. In this industry division, the industry groups with the youngest employees were crude-petroleum and natural-gas production and metal mining; the median age of men in each of these industry groups was 39, and the third-quartile ages were 48 and 50, respectively. The proportion of men aged 65 and over was highest for anthracite mining (4.7 percent) and non-metallic mining and quarrying (4.3 percent) and lowest for crude-petroleum and natural-gas production (2.0 percent).

**Contract construction.**—The median ages of men in this industry ranged from 38 years for employees of general contractors, other than building, to 43 years for workers employed by general contractors in building construction. The corresponding third-quartile ages were 48 and 54. The men employed by general-trade contractors were only slightly younger as a group than those working for general building contractors.

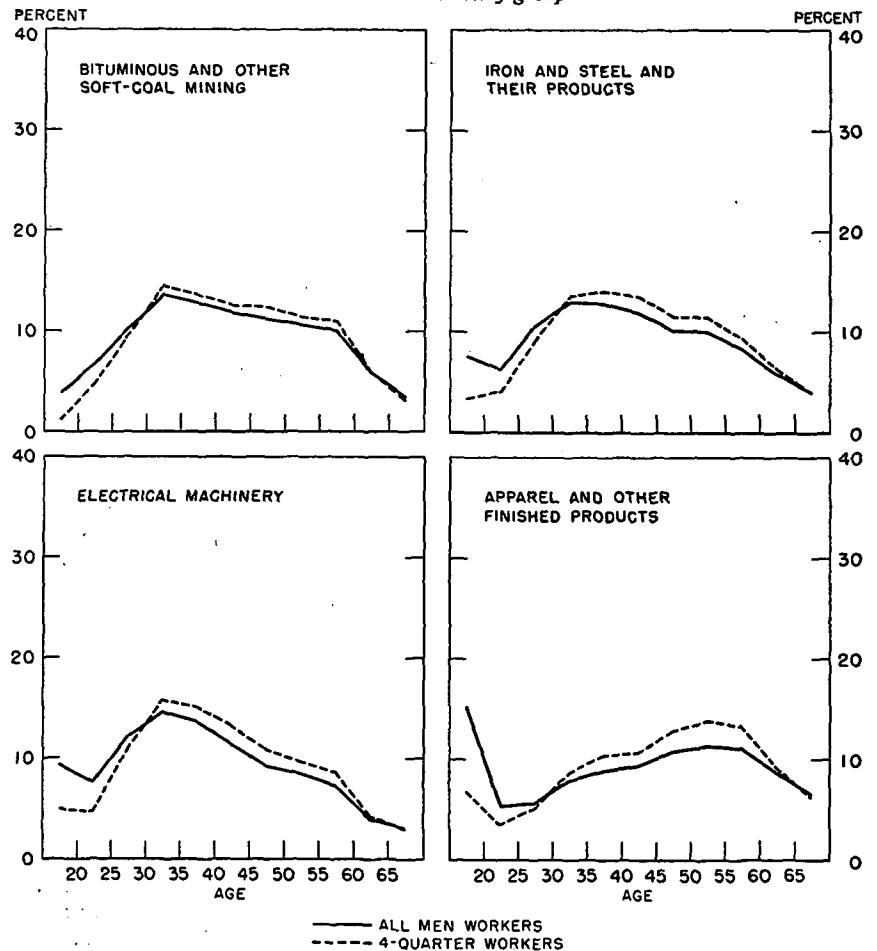
**Manufacturing.**—Among manufacturing industries in 1944, the industry groups whose male employees had the oldest average ages were apparel and other finished products made from fabrics, and leather and leather products. In these respective industry groups the median ages of men were 44 and 43 years, and the third-quartile ages were 56 and 55 years. Other

manufacturing industry groups with relatively high median ages for men were tobacco manufacturing (42 years); furniture and finished lumber products (41 years); and printing, publishing, and allied trades (41 years). The youngest median ages in manufacturing are shown for men in food and kindred products (35 years); transportation equipment, except automobile (37 years); and electrical machinery (37 years). The third-quartile ages for these industry groups were 48, 47, and 49 years, respectively. The proportion of men aged 65 and over ranged from 7.1 percent in establishments making leather and leather products to only 2.0 percent for manufacturers of petroleum and coal products.

**Transportation, communication, and other public utilities.**—The men employed in the transportation in-

dustries were generally a relatively young group. In water transportation the median age of men was 31 years and the third-quartile age, 43; in trucking and warehousing for hire the corresponding ages were 35 and 44 years. An exception, however, were the men employed by local railways and bus lines, who had a median age of 41 years and a third-quartile age of 52. The industry group in this division with the oldest men employees was electric and gas utilities—median age, 43; third-quartile age, 53. Next oldest were the men employed in the communication industries; their median age was 42 years and their third-quartile age, 51. The proportion of men over 65 was as low as 1.3 percent in "other transportation" (air transportation, taxicabs, interurban and interstate bus lines, and so forth) and as high as 6.8 percent for local railways and bus lines.

Chart 1.—Percentage distribution of men workers with wage credits in 1944, by age for each selected industry group



**Wholesale and retail trade.**—Half of the men employed in retail filling stations in 1944 were under 28 years of age; three-fourths of them were not yet 40 years of age. The men employed in retail food and liquor stores were also relatively young—half of them under age 31 and three-fourths under age 46. On the other hand, as compared with employees in other industry groups in this division, men working for establishments engaged in both wholesale and retail trade and those employed in eating and drinking places were relatively old; the median age of men in each of these industry groups was 42 and the third-quartile ages were 54 and 53, respectively. The proportion of men over 65 ranged from 2.2 percent for retail filling stations to 7.5 percent for establishments doing a combined wholesale and retail business.

**Finance, insurance, and real estate.**—Men employed in finance, insurance, and real estate were, on the average, older than those in any other division. By industry group their median age was as low as 43 years (insurance carriers) and as high as 50 years (real estate). A fourth of the men employed in real estate were over age 60; the corresponding third-quartile age for insurance carriers was 52 years. As many as 14 percent of the employees of banks and trust companies and real estate were over age 65, but for insurance carriers only 4 percent were over age 65.

**Service industries.**—The youngest median age for any industry group is found in the service industries. Half of the men in amusement and recreation and related services in

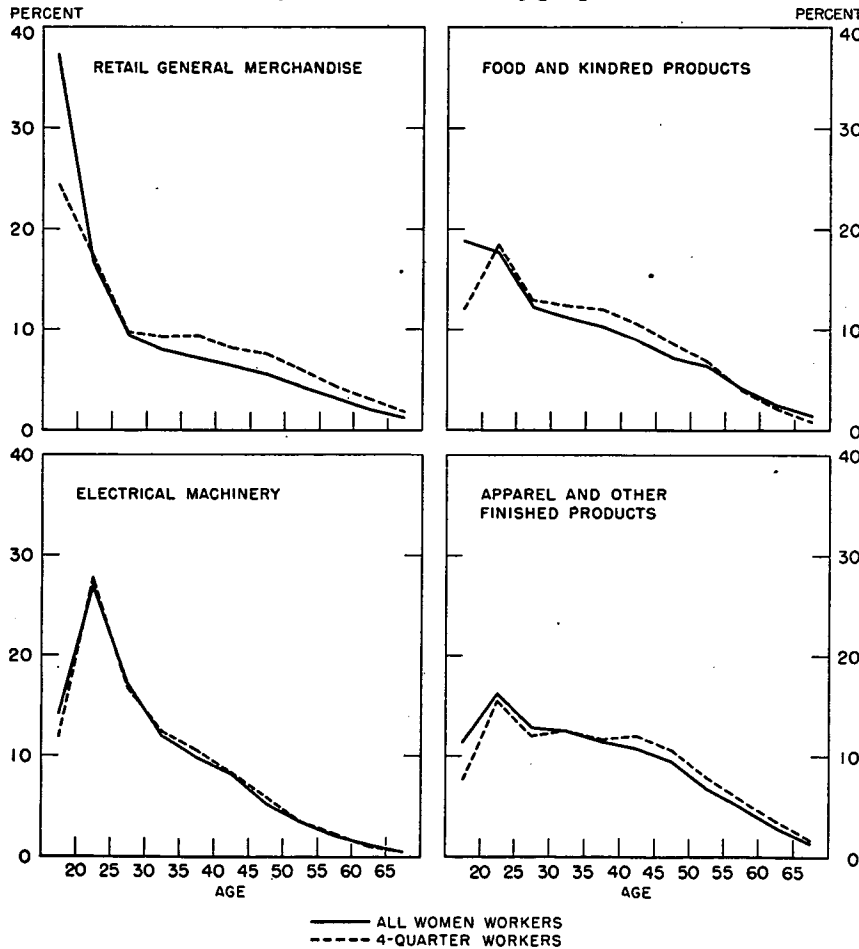
1944 were under age 21. The median for motion picture establishments was also low—only 30 years—but it was as high as 45 years for nonprofit membership organizations and 44 years for hotels, rooming houses, camps, and other lodging places. Third-quartile ages ranged from 44 years in the amusement and recreation industry and in automobile repair services and garages to 57 years for hotels, rooming houses, and the like. In this latter industry group, 10 percent of the men in 1944 were aged 65 and over, but in automobile repair services and garages only 2.8 percent were that age.

**Women Workers**

Because of the heavy concentration of women workers in manufacturing industries, wholesale and retail trade, and the service industries, the discussion of the age distribution of women by major industry group will be confined to these three industry divisions.

**Manufacturing industries.**—The median age of women in manufacturing industries was 30 years or more in only seven industry groups: apparel and other finished products made from fabrics (34 years); tobacco manufacturing (33 years); leather and leather products (32 years); textile-mill products (32 years); printing, publishing, and allied industries (31 years); food and kindred products (31 years); and lumber and timber basic products (30 years). The youngest median age—28 years—is shown for four industries: stone, clay, and glass products; electrical machinery; machinery, except electrical; and automobiles and automobile equipment. The third-quartile age of women was highest in establishments manufacturing apparel and other finished products from fabrics (45 years) and leather and leather products (44 years). It was lowest (37 years) in establishments manufacturing transportation equipment, except automobiles; electrical machinery; and automobiles and automobile equipment. In no manufacturing industry group was the proportion of women aged 65 and over as high as 2 percent; but the proportion aged 55–64 was as high as 7.8

Chart 2.—Percentage distribution of women workers with wage credits in 1944, by age for each selected industry group



percent in apparel and other finished products from fabrics, 6.7 percent in leather and leather products, and 6.5 in food and kindred products. The proportion of women under age 20 ranged from 19 percent in food and kindred products to 8.4 percent in tobacco manufacturing and 8.7 percent in transportation equipment, except automobiles.

*Wholesale and retail trade.*—In this industry division, the median age of women employed in 1944 was highest (32 years) in retail establishments selling apparel and accessories, and lowest (24 and 26 years, respectively) in retail general merchandise establishments, which include limited-price variety stores and mail-order houses, and in retail trade, not elsewhere classified. In all other industry groups in this division the median age was 27, 28, or 29 years. The third-quartile ages ranged from 45 years in retail apparel and accessories to 38 in retail general merchandise and 36 in retail filling stations. In wholesale and retail trade, as in manufacturing, the proportion of women aged 65 and over was less than 2 percent in every industry group; the proportion aged 55–64 was 5 percent or more only in retail apparel and accessories (7.5 percent), eating and drinking places (5.4 percent), and wholesale and retail trade combined (5.4 percent). The proportion under age 20 was as high as 37 percent in retail general merchandise, 28 percent in retail trade, not elsewhere classified, and 27 percent in retail food and liquor stores.

*Service industries.*—Among the service industries, the industry groups with the oldest median age (35 years) for women employees in 1944 were hotels, rooming houses, camps, and other lodging places and nonprofit membership organizations. These two industry groups had the oldest third-quartile ages in this industry division—47 and 46 years, respectively. The youngest median age (23 years) and also the youngest third-quartile age (36 years) were in the

motion picture industry. Two percent or more of the women were aged 65 and over in three of the service industries—hotels, rooming houses, and other lodging places (2.5 percent); medical and other health services (2.0 percent); and nonprofit membership organizations (2.1 percent). The proportion aged 55–64 was as high as 10 percent in hotels, rooming houses, and other lodging places, while as many as 40 percent of the women in the motion picture industry, which includes theatres as well as studios, were under age 20.

### Conclusions

It is apparent that the age distribution of workers in individual industries differs substantially from that of all workers in covered employment. Workers in some industries are comparatively young, either because the industry has recently been expanding and recruiting new workers or because the industry characteristically requires employees with youth and vigor, can use inexperienced and unskilled workers, or pays too low wages to attract mature workers. In these industries the incidence of disabling illness, old age, and death is undoubtedly less than average. For an industry health, welfare, and retirement fund operating under such circumstances the immediate cost of benefits will tend to be relatively low.

Other industries, however, are not so favorably situated. They are industries that for one reason or another have been contracting or have experienced little if any recent expansion and so have been taking on relatively few young workers; or they need mostly highly skilled, experienced, or mature workers. In these industries the rate of sickness, disability, superannuation, and death will be higher than average and as a result immediate benefit costs will be relatively heavy.

With the passage of time, however, an industry may lose its short-range advantage of low cost. In some industries in which the product or service is subject to wide fluctuations in

demand, the shift from low to high-cost conditions may occur in only a few years.

The industry data also suggest problems of another sort. In practically every industry, women are younger, as a group, than men; moreover, their length of service is probably relatively brief. Women therefore present a special case, with respect to the types of protection they most need and also the kind of eligibility requirements and benefit formula best adapted to their particular employment and earnings characteristics. Because of the wide differences among industries in the proportions of workers who are women, the urgency of giving consideration to their special interests will undoubtedly be felt in varying degrees by those who plan industry welfare funds.

Two more industry characteristics that will affect the extent of protection provided by industry welfare and retirement funds are seasonality and worker mobility. Some industries add large numbers of employees in the rush seasons; at other times these workers either find jobs in other industries, withdraw from the labor force, or are unemployed. In practically every industry, also, there is a sizable inflow of workers coming from other industries and an outflow of workers leaving to take jobs elsewhere. These factors combine to create a considerable group of workers whose attachment to the industry is relatively brief and whose status will call for special attention in plans for industry welfare and retirement funds.

The extent of these and similar problems and their significance for the operation of a health, welfare, and retirement fund will need to be carefully appraised for each industry establishing such a fund. Many of the statistical data needed to provide a factual basis for such an appraisal now are available, or can be made available, in tabulations derived from the wage and employment records maintained since 1936 under the Federal old-age and survivors insurance system.