

**Future Outlook on Employment of
Middle-Aged and Senior Workers:
Future Estimates on the Number of
Workers and a Survey on Firms**

Summary

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Objective and method of survey and research

To find out in which kinds of jobs middle-aged persons and senior citizens will be able to exercise their potential in future years, (1) we made an estimate of the workforce in different industries and occupations by sex and age. At the same time, (2) we made an analysis of recent employment trends of middle-aged persons and senior citizens from macroeconomic data and (3) conducted a questionnaire survey on firms to investigate their views and policies on vocational abilities and continuous employment of middle-aged persons and senior citizens and on the baby boomers.

The estimate of the workforce was obtained by using the estimates in the Employment Policy Study Group's "Outlook on and Issues Related to Labor Supply Conditions" (1999) and by extending into the future the data on industrial and occupational trends of cohorts categorized by sex and age in the population censuses of 1995 and 2000.

Outline of research results

1. Occupations with increased absorption of middle-aged and senior workers:

Occupations with an increasing demand for labor look promising for middle-aged and senior workers as well

To ascertain in which fields middle-aged people and senior citizens can exercise their potential, we picked up jobs from two angles; namely, (1) for which jobs is demand increasing, which was determined using data on total number of employment for all age groups and (2) in which jobs can they work. For the latter, we compared the flow of workers in and out of each occupation for cohorts of middle-aged people and senior citizens with the average flow of workers in and out of all occupations. Because there was no significant difference between the trends of middle-aged people of 45 years and above and of senior citizens of 60 and above, the discussion below pertains mainly to all people of 45 years and older.

Workers in typical occupations are not increasing

The results of our survey show that occupations with increased absorption of middle-aged people and senior citizens from 1995 to 2000 were “workers assisting in daily living (home helpers, etc.),” “superintendents of buildings and parking lots,” “workers in the service industry not falling under any other categories (tour guides, etc.),” “workers in the transportation industry not falling under any other categories (car inspectors, etc.),” and “computer operators” (Figure 1).

While many middle-aged people and senior citizens are farmers and sericulturists, company directors, retail store owners, and managers of firms and other organizations, both in terms of absolute number and as percentage of all occupations, their number is declining significantly in the last five years. While these are typical occupations for middle-aged and senior workers, attention should be given to the ability of these occupations to absorb middle-aged and senior workers as labor force in the future.

Specialized, technical occupations, including IT-related jobs, also look promising

Many specialized, technical occupations, such as the occupation of information processing engineers, also had increased absorption of middle-aged and senior workers.

While some firms are skeptical about the ability of middle-aged and senior workers to engage in information processing and other IT-related jobs, as shown in our questionnaire survey, the fact is that either middle-aged and senior workers' flow into

these jobs is greater than the average or their flow out of these jobs is smaller than the average. This trend was confirmed by data on the flow of workers in and out of occupations in the last five years.

Occupations with an increasing demand for labor are also promising

A noticeable aspect of occupations' ability to absorb middle-aged and senior workers is that such ability is determined largely by the overall demand for labor in those occupations. We indicated our criteria for selection of occupations above. With the exception of a few cases, many of the occupations that met the first criterion (the overall demand for all age groups is increasing) also satisfied the second criterion (the net inflow of middle-aged and senior workers is above average). It can be considered that in occupations in which demand grew, efforts were made to prepare the environment for middle-aged and senior workers and employment was provided to them. In other words, many of the jobs that are expected to absorb middle-aged and senior workers are not necessarily jobs geared particularly for them but jobs that can be performed both by young workers and middle-aged and senior workers.

2. Future estimates:

A decrease in managers and retail store owners and an increase in salespeople, workers in the service industry, and information processing engineers.

Future estimates were taken based on the assumption that the abovementioned trend will continue in the future. As a result, many of the jobs in which a large number of middle-aged and senior workers are working today, such as general clerical work and farming and sericulture, will continue to be major jobs for them in 2015 (Figure 2).

Some occupations, such as management of firms and other organizations and the job of retail store owner, however, will no longer be considered major jobs for middle-aged and senior workers (not in the top 20 jobs) in 2015, as demand will decrease. In their place, occupations for "insurance agents and sales persons," "workers in the service industry not falling under any other categories (tour guides, etc.)," "civil engineers and surveyors," and "information processing engineers" will become major jobs.

3. Middle-aged and senior workers' vocational ability and employment:

Advantages in interpersonal skills and intellect but a gap in ability and employment

To understand the background of the above trends, we conducted a questionnaire

survey on firms. The results showed that many firms considered occupations that required a relatively high level of interpersonal skills and intelligence as occupations in which workers' skills can be improved on until around 65 years of age.

There is, however, a wide range of jobs that seem suited to giving middle-aged and senior workers the opportunity to bring out their potential, but in reality, only a small percentage of workers in those jobs are middle-aged people and senior citizens. Researchers, engineers, managers, and salespeople are some of the examples (Figure 3). In other words, there is a gap between jobs middle-aged and senior workers can exercise their ability and jobs in which they are actually employed. This gap is probably related to the issue of firms' employment management and on the macroeconomic level, to the issue of labor demand conditions in each occupation.

4. Treatment of baby boomers:

Many firms have settled the issue while some large firms must still address it

In our questionnaire survey, we asked firms if there were challenges related to treatment of regular employees of the baby-boom generation. The results showed that more than 80 percent of the companies "had no particular challenges" or "there were no challenges because there were only a few baby boomers in the firm" (Figure 4). However, among large firms that employ more than 500 workers, about 40 percent said "there were challenges." Many of those firms indicated "growing personnel costs" as a problem.

5. For a more active role played by middle-aged people and senior citizens (policy implications):

Measures related to employment management and macroeconomic labor supply conditions

With regard to employment management, we asked firms what they thought was problematic about employing all workers who wished to continue working after the mandatory retirement age. Many companies mentioned "the need to continue employing workers who cannot be expected to perform to the required standard," "the need to review the wage system," and "its effect on damping employment of new recruits." The review of wage systems is expected to move further forward with efforts now being made to introduce performance-based pay.

In relation with employment of new recruits, we should note that the size of Japan's labor force will diminish in the future. To maintain and raise the level of living standard of the Japanese people, we need to moderately increase the labor productivity,

improve the labor force participation rate, or achieve both. In this light, we need not ask whether we should give priority to employment of young workers or of middle-aged and senior workers, but focus more on removing individual obstacles that prevent workers from exercising their full potential in all age groups.

With respect to macroeconomic labor supply conditions, measures can be considered from two angles of middle-aged people and senior citizens' vocational ability and labor demand in each occupation. Such measures may include (1) employing more middle-aged and senior workers in jobs in which their interpersonal skills and intelligence can be effectively utilized (increasing demand in order to utilize available ability), (2) supplementing decline in middle-aged and senior workers' ability in jobs there is demand for labor (supplementing ability in order to meet demand), and (3) vocational development focused mainly on development of interpersonal skills and intelligence (improving ability).

Figure 1. Occupations with large absorption of workers of 45 years old and above (including both men and women)

Occupation No.	Occupation	Workers of 45 years old or above			Total all ages
		Number of workers in 2000	Increase 1999-2000 (%)	Relative inflow/out flow rates	Weighted change rate
(T)	Total	(30,336,716)	(0.8)	(1.000)	(1.000)
78	Salespeople (excluding products, insurance, and real estate)	466,639	26.9	1.084	1.158
197	Other manufacturers of foods, beverages, and tobacco (inc. delis)	382,597	33.1	1.273	1.258
9	Civil engineers and surveyors	225,564	32.0	1.030	1.168
96	Workers in the service industry not falling under any other categories (inc. tour guides)	221,222	80.7	1.705	1.889
100	Other workers in the security industry (inc. guards)	211,238	2.9	1.330	1.228
52	Specialized, technical workers not falling under any other categories (inc. interpreters)	146,250	20.0	1.121	1.124
155	Metal machine tool operator	144,157	21.5	1.244	1.202
80	Workers assisting in daily living (inc. home helpers)	141,145	121.9	2.478	2.205

25	Other workers in the insurance and medical industries (inc. medical and pharmaceutical inspectors)	130,079	15.0	1.020	1.258
79	Other workers in the pseudo sales industry (inc. brokers)	126,748	38.2	1.380	1.385
10	Information processing engineers	98,250	87.1	1.040	1.331
93	Superintendents of buildings and parking lots	94,969	17.5	1.714	1.283
27	Other specialized social welfare workers	93,129	9.9	1.010	1.136
63	Post and telecommunications clerks	62,815	35.3	1.178	1.281
66	Computer operators	61,881	86.8	1.298	1.519
15	Pharmacists	58,248	25.8	1.126	1.147
129	Post and telegram clerks	53,492	30.1	1.096	1.154
125	Workers in the transportation industry not falling under any other categories (car inspectors, etc.)	51,354	46.7	1.474	1.462
177	Other assemblers and repairers of transport machinery	34,109	26.8	1.136	1.169
11	Other engineers (industrial safety and health engineers, etc.)	32,020	22.9	1.057	1.165
29	Other legal workers (inc. notaries public)	25,925	12.7	1.382	1.123
36	Teachers of schools for the blind, deaf, and other challenged children	22,310	57.6	1.111	1.207
19	Medical radiation and X ray engineers	14,524	25.8	1.061	1.212
65	Keypunchers	11,674	78.6	1.046	1.198
191	Processors of milk and dairy products	10,735	19.0	1.117	1.154
145	Manufacturers of nonferrous metals	10,496	33.9	1.259	1.277

Note:

- (1) Listed above are occupations that have more than 10,000 workers who are 45 years old or above, whose rates of increase during 1995 to 2000 are at least 10 percent higher than the rates of increase for all occupations (weighted change rates of more than 1.1), and whose relative inflow/outflow rates are more than 1.
- (2) "Weighted change rates" are ratios of the percentage of a particular occupation in all occupations in 2000 and 1995. When the number of workers increases more than in all occupations, the ratio exceeds 1.
- (3) "Relative inflow/outflow rates" are ratio of a particular occupation to all occupations regarding the average inflow/outflow rates of the 45-years-and-above cohort (there are five cohorts) from 1995 to 2000. When the inflow/outflow rate of a particular occupation is higher than that of all occupations, the rate exceeds 1.

Figure 2. Top 20 occupations employing the largest number of workers of 45 years old and above in 2015 (future estimates)

Occupation No.	Occupation	Number of workers of 45 years old or above
(T)	Total	(31,299,453)
58	General clerks	4,698,222
101	Farmers and sericulturists	2,033,241
73	Salespeople of products	1,460,939
59	Accounting clerks	1,215,398
85	Cooks	1,015,221
78	Salespeople (excluding products, insurance, and real estate)	959,872
117	Car drivers	946,509
54	Company directors	884,191
273	Laborers not falling under any other categories (inc. cleaners)	880,707
70	Sales clerks	804,315
197	Other manufacturers of foods, beverages, and tobacco (inc. delis)	471,437
271	Deliverymen	457,001
18	Nurses	420,975
10	Information processing engineers	405,634
96	Workers in the service industry not falling under any other categories (inc. tour guides)	371,897
162	Other metalworkers (inc. manufacturers of metal furniture and fittings)	355,836
265	Construction workers	339,574
76	Insurance agents and salespersons	323,409
87	Waiters and waitresses and attendants	311,338
9	Civil engineers and surveyors	302,473

Note: Occupations marked by shaded yellow are occupations that would rise in the ranking from 2000.

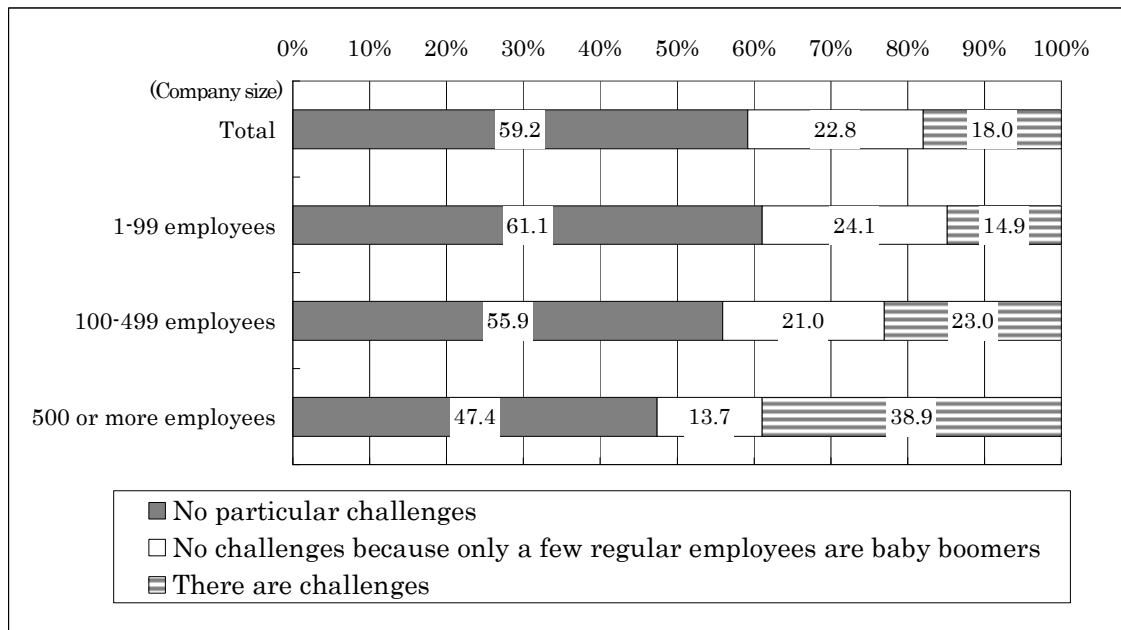
Figure 3. Relation between abilities and employment

	Percentage of “60 and above” (above average)	Percentage of “60 and above” (below average)
Skills level rises with age (above average)	General clerks, bill collectors, meter readers, transportation clerks	Scientists, researchers, engineers (agriculture, forestry, fisheries, foods, mining and manufacturing), engineers (architecture, civil engineering, and surveying), doctors, dentists, managers, accounting clerks, production-related clerks, sales administration clerks, sales clerks, salespeople (procurement and sales), telecommunications clerks
Skills level rises with age (below average)	Cooks, superintendents of residential buildings and other buildings, guards, motor men, drivers, stationary engineers, construction machinery operators, electricians, construction workers, carriers, cleaners	Information processing engineers, nurses, pharmacists, specialized social welfare workers, planning clerks, computer operators, attendants, waiters and waitresses, manufacturers

Source: The Japan Institute for Labour Policy and Training, *Survey on Employment of Middle-Aged and Senior Workers by Firms* (2004)

Note: “Percentage of “60 and above” (above average)” refers to occupations with the percentage of workers 60 and above in all tabulated workers higher than the average for all occupations of 6.3 percent. “Skills level rises with age (above average)” refers to occupations with the percentage of firms that considered that skills related to an occupation can rise with age was higher than the average for all occupations of 20.2 percent.

Figure 4. Challenges concerning treatment of regular employees of the baby-boom generation



Source: The Japan Institute for Labour Policy and Training, *Survey on Employment of Middle-Aged and Senior Workers by Firms* (2004)

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Bibliography

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Bibliography

- [1] Richard B. Freeman, "The Effect of Demographic Factors on Age-Earnings Profiles", *The Journal of Human Resources*, Sum. 1979; 14(3): pp. 289-318
- [2] Richard B. Freeman, "An Empirical Analysis of the Fixed Coefficient 'Manpower Requirements' Model, 1960 - 1970", *The Journal of Human Resources*, Spr. 1980; 15(2): pp. 177-199
- [3] Employment Policy Study Group, *Roudoryoku Jukyu no Tenbo to Kadai* (Outlook on and Issues Related to Labor Supply Conditions) (May 1999)
- [4] The Japan Institute for Labour Policy and Training and Mitsubishi Research Institute, Inc., *Sangyo-betsu Shokugyo-betsu Shuugyoshasu no Shorai Yosoku* (Future Estimates of Number of Workers by Industry and Occupation) (March 2000)
- [5] Yuji Genda, *Shigoto no Nakano Aimaina Fuan* (Vague Anxiety in Work) (December 2001)
- [6] Employment Policy Study Group, *Koyo Seisaku no Kadai to Tomen no Tenkai* (Issues Related to Employment Policy and Outlook for the Near Future) (July 2002)