

Research notes

Industry and Female Managers: Insights for Promoting Women's Active Participation in the Workplace

Tamotsu Nagata

Promotion of women's participation and advancement in the workplace is recognized as a key national policy in Japan. In December 2005, the Japanese Cabinet approved "The Second Basic Plan for Gender Equality," thereby setting up the government objective of increasing the share of women in leadership positions to 30% at least by 2020 in all fields of society¹ by facilitating initiatives to promote their active participation in each field.

There are no clear guidelines in the Plan as to which statistics are used as the grounds for determining the share of women in managerial positions. Materials such as those distributed at the Labor Policy Council seem to draw on statistics from *Basic Survey on Wage Structure* (Ministry of Health, Labour and Welfare, MHLW) on the number of persons in positions equivalent to section manager and positions equivalent to director in companies with 100 or more employees.

The share of women in managerial positions was a mere 1.8% in 1990 but rose to 9.3% in 2016 with labor-management initiatives and government support. Although the growth in the share is also gradually increasing, there is still a long way to go to reach 30%. Under typical Japanese employment practices, by which managerial positions are largely filled by internal promotion, training for such talents requires a greater number of years. (In Japan, managerial work are more of a status than a job type, unlike countries with developed external

labor markets.) That is, increasing the number of women in managerial positions takes time to sufficiently increase that of women who are potential candidates for such positions, namely, the women in positions equivalent to subsection chief. In light of this, the government set out new realistic goals in "The Fourth Basic Plan for Gender Equality" in December 2015, for the percentages of women among employees in each management level of private corporations in 2020 while maintaining the original target of 30%. These new goals were set at 25% for women in positions equivalent to subsection chief, 15% for women in positions equivalent to section manager, and 10% for women in positions equivalent to director.

Typically, small-sized companies only require executives for their management. As they increase in size, companies—whatever the industry—need managers to assist the executives and share the work of managing non-managerial employees. Moreover, depending on the industry, there may be unique approaches to pursuing or managing work processes. The percentage of managerial positions among the total number of employees (hereinafter referred to as "managerial ratio") therefore differs depending on company size and industry.

Table 1 shows the ratio of female among total employees on open-ended contracts by company size and the managerial ratio of total employees, as well as the managerial ratio of women (percentage

1. "All fields of society" is simply taken to mean "not only the national government but also local government bodies, private companies, and various groups and organizations." The ratios of women in managerial positions vary across the industries, company sizes, and regions, and among the individual private corporations. Rather than perceiving this as a problem, it may be more constructive to see it as a clue toward possible means of promoting the active participation of women as a whole.

**Table 1. Share of females in employees and managerial positions by company size
(Employees on open-ended contracts)**

(%, Managerial positions = Director level + Section manager level)

Company size	Ratio of female employees ¹	Managerial ratio ²		Ratio of female in managerial positions ³
		Total male and female	Female	
Companies with 100 employees or more	31.7	10.6	3.1	9.3
Companies with 100–999 employees	34.5	9.9	3.2	11.3
Company with 100–499 employees	34.9	9.8	3.1	11.1
500–999 employees	33.6	10.0	3.5	11.7
Companies with 1,000 employees or more	28.5	11.4	2.9	7.3

Source: MHLW, *Basic Survey on Wage Structure*, 2016.

Notes: 1. Ratio of female employees = Employees on open-ended contracts (female) / Employees on open-ended contracts (male + female) × 100%

2. Managerial ratio (total) = (Director + Section manager) / Employees on open-ended contracts (male + female) × 100%

Managerial ratio of female = (Female director + Female section manager) / Employees on open-ended contracts (male + female) × 100%

3. Ratio of female in managerial positions = Women in managerial positions / Managerial positions (male + female) × 100%

**Table 2. Share of females in employees and managerial positions by industry
(Employees on open-ended contracts)**

(%, Managerial positions = Director level + Section manager level)

Industry	Companies with 100 employees or more							
	Ratio of female employees ¹	Managerial ratio ²		Ratio of female in managerial positions ³	Ratio of female employees ¹	Managerial ratio ²		Ratio of female in managerial positions ³
		Total male and female	Female			Total male and female	Female	
Industry total	31.7	10.6	3.1	9.3	34.5	9.9	3.2	11.3
Construction	12.8	22.2	1.9	1.1	11.6	14.6	2.5	2.0
Manufacturing	18.1	9.8	2.2	4.1	22.0	9.0	1.6	4.0
Electricity, gas, heat supply, and water	10.5	7.7	2.1	2.8	11.9	12.4	2.3	2.2
Information and communications	19.9	16.4	4.7	5.7	20.5	15.4	6.0	8.0
Transport and postal services	11.5	5.2	2.2	4.9	10.7	5.5	2.5	4.9
Wholesale and retail trade	27.8	14.2	3.0	5.8	27.9	14.4	3.0	5.8
Finance and insurance	49.9	12.1	2.4	10.0	38.0	15.5	3.9	9.6
Real estate and goods rental and leasing	28.9	14.0	3.1	6.3	30.8	16.1	2.9	5.6
Scientific research, professional and technical services	22.2	14.0	4.6	7.3	26.9	14.1	4.9	9.3
Accommodations, eating and drinking	34.3	8.5	2.5	10.1	35.5	10.4	3.0	10.2
Living-related and personal services and amusement services	39.9	9.4	2.0	8.4	42.1	8.1	1.5	7.7
Education, learning support	36.3	6.9	3.4	18.1	39.0	8.1	3.6	17.6
Medical, health care, and welfare	69.4	5.8	3.6	43.0	69.6	5.3	3.6	46.6
Compound services	23.8	14.5	3.0	4.9	34.5	18.2	3.5	6.7
Services (not elsewhere classified)	25.3	7.7	3.0	9.9	24.9	8.6	3.4	9.8

Source: MHLW, *Basic Survey on Wage Structure*, 2016.

Note: See notes in Table 1.

of women in managerial positions among total number of male and female employees) and the ratio of female in managerial positions (percentage of women in managerial positions among the total number of managerial positions). MHLW's *Basic Survey on Wage Structure* provides aggregated data on managerial positions for companies with 100 or more employees.

The larger the company size, the higher the managerial ratio. On the other hand, the ratio of female employees decreases as company size increases. Both the managerial ratio of women and the ratio of women in managerial positions are highest among medium-sized companies with 500–999 employees. Among large companies with 1,000 employees or more, there is a lower percentage of female employees on open-ended contracts, and the percentage of women in such positions is low² despite a large percentage of managerial employees.

As this suggests, company size may have some influence on the appointment of women to managerial positions. The following analysis therefore looks not only at the overall figures for companies with 100 or more employees, but also at the figures for companies with 100–999 employees.

The paradox of women's active participation in the medical and welfare industry

Table 2 shows figures demonstrating women's participation and advancement in the workplace by industry. (The mining and quarrying of stone industry is included in the total for all industries, but is not shown on the table because it includes figures that are difficult to interpret due to the low numbers of women in managerial positions.)

The average ratio of women in managerial positions for companies with 100–999 employees is over 10% (11.3%) in all industries. The industry with the highest ratio is medical, health care, and welfare with 46.6%; namely, the ratio of female to male among directors and section managers is

around 1:1. The only other industry for which the ratio of women in managerial positions is above average in education, learning support (17.6%). In both industries, it is particularly high in comparison with others. Would the overall ratio of women in managerial positions rise if more women took employment in such industries?

Looking at the managerial ratios (in the third column from the right of the table), the managerial ratio (percentage of directors and section managers among employees on open-ended contracts) still varies from industry to industry, even among the same company sizes. The lowest managerial ratio is for medical, health care, and welfare. The managerial ratio in education, learning support is also lower than the average. In contrast, industries with high managerial ratios are compound services, real estate and goods rental and leasing, finance and insurance, and information and communications (in descending order). Even in construction, which has the lowest ratio of women in managerial positions, the managerial ratio is relatively high, at 14.6%. As the industries such as finance and insurance and information and communications require a large number of managerial positions, in absolute terms, they have a large number of women in managerial positions, even when the ratio of men to women is 10:1.

The ratio of women in managerial positions among the total employees on open-ended contracts are 3.9% for the finance and insurance and 6.0% in information and communications, in contrast with 3.6% in medical, health care, and welfare. This shows that there are higher ratio of women in managerial positions in finance and insurance, and information and communications. As a result, it can be said that it is easiest for women to rise to managerial positions in information and communications, while it is difficult for women to rise to managerial positions in living-related and personal services and amusement services, and manufacturing.

2. The specific reasons for this are unknown. Possible reasons could include the high percentage of large companies in the industries that women do not apply to, or, women leaving employment according to the Douglas-Arisawa's law (negative correlation between husbands' income levels and wives' employment rates), as large companies provide opportunities for them to find spouses with high incomes.



Source: MHLW, *Basic Survey on Wage Structure*, 2016.

Notes: 1. The percentages shown are for employees on open-ended contract in companies with 100–999 employees.

2. Ratio of female employees = Employees on open-ended contract (female) / Employees on open-ended contract (male + female) × 100%

Figure 1. Relationship between ratio of female employees and managerial ratio

What about increasing the number of women in industries with high managerial ratios?

Figure 1 is a scatter plot of the managerial ratios and the ratios of female employees.³ There appears to be no relationship between the managerial ratio and the ratio of female employees. (There may be a possibility that the high ratio of female employees in the medical, health care, and welfare, where both men and women have difficulty securing managerial positions, may slightly reduce the ratio of women in managerial positions as a whole.)

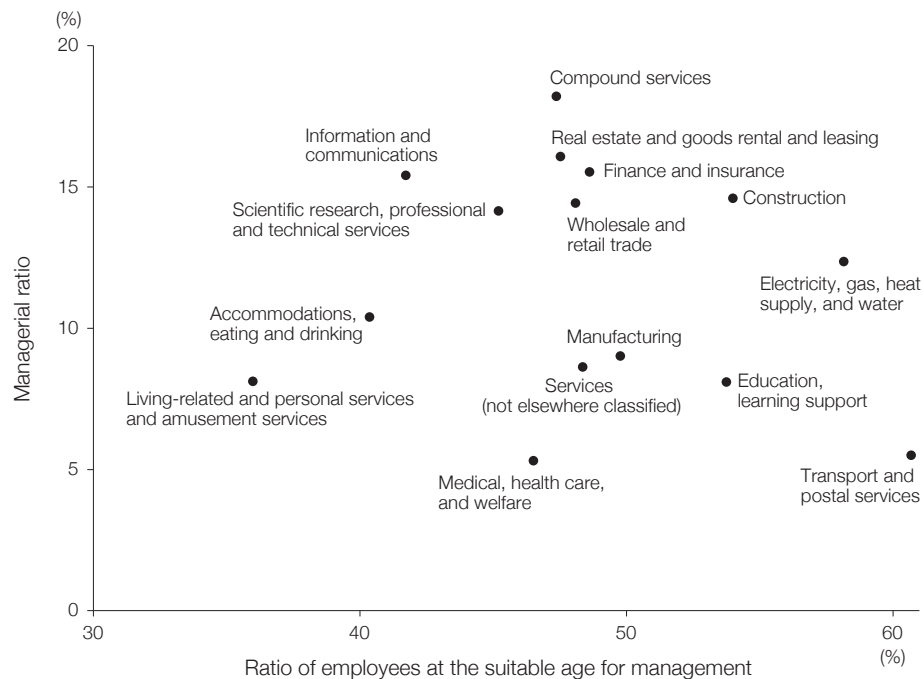
Namely, the low ratio of women in managerial positions may not necessarily be attributable to the fact that a considerable number of women work in industries with low managerial ratios regardless of gender.

Depending on how one looks at it, however, if efforts could be made to increase the hiring of women and facilitate the retention of women

in industries with high managerial ratios, that could contribute to improve the ratio of women in managerial positions as a whole. Specifically, policies to support companies to establish a women-friendly employment management focusing on key industries could be effective means of increasing the ratio of women in managerial positions within these industries and in Japan as a whole. (Key industries to be focused are compound services, real estate and goods rental and leasing, finance and insurance, information and communications, and construction in which the ratios of women in managerial positions are not high.) That being said, having many women take employment in medical, health care, and welfare, just because the industry has a high ratio of women in managerial positions, is not really anticipated to raise the managerial ratio of women as a whole.

Under the typical Japanese employment practices, by which managerial positions are

3. The correlation coefficient is -0.267 , but excluding the exceptionally high ratio of women in the medical, health care, and welfare industry, there seems to be no correlation between the two.



Source: MHLW, *Basic Survey on Wage Structure*, 2016.

Note: The figures represent employees on open-ended contract (male + female) in companies with 100–999 employees, who are at the suitable age for management (aged 40–59).

Figure 2. Relationship between age composition and managerial ratio

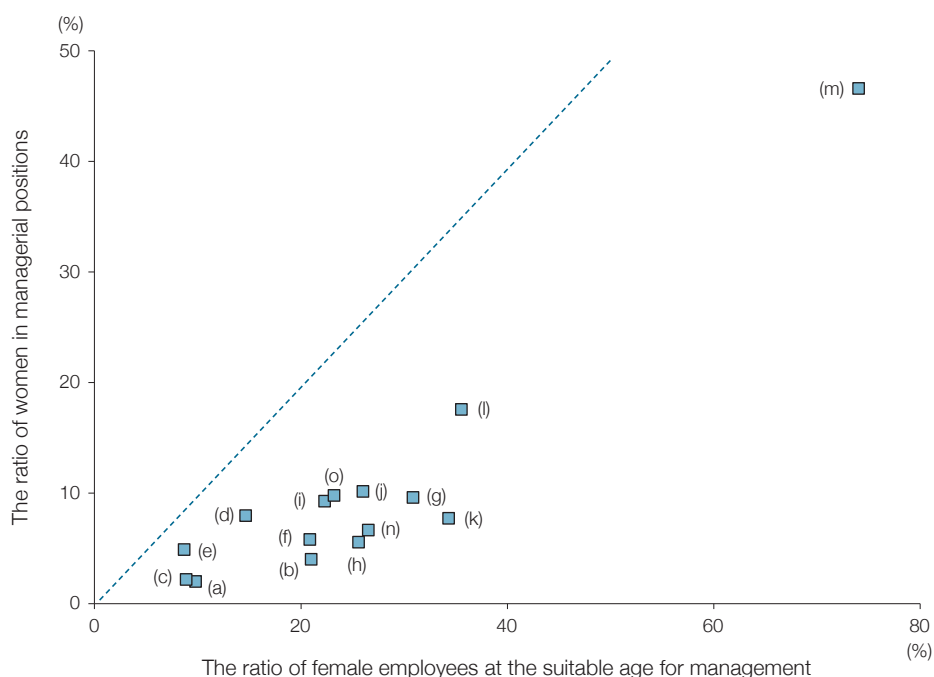
essentially filled with people promoted from within the company, employees require a certain years of continuous service to reach managerial positions. If employees who joined a company on graduating university are promoted to section manager in around their 18th year of service at that company, they reach the suitable age for management from about age 40 onward. Looking at female directors and section managers at companies with 100 employees or more for the different ages divided into five-year groups, the highest percentage can be found in the 50–54 age group (26.3%), followed by 45–49 (22.5%), 55–59 (18.7%), and 40–44 (15.2%). In other words, more than 80% of female managers are concentrated in the 20 years from ages 40 to 59. Let us therefore call the 40–59 age bracket the “suitable age for management.”

Figure 2 is a scatter plot showing the ratio of employees at the suitable age for management and

the managerial ratio (male and female in total) for companies with 100–999 employees, categorized by industry. This shows that there is no connection between the two; the ratio of managerial positions required varies from industry to industry due to business-related characteristics, even when company size is fixed to a certain extent.⁴

Industries with high ratios of women among employees at the suitable age for management (40–59) in companies with 100–999 employees are medical, health care, and welfare, education, learning support, living-related and personal services and amusement services, and finance and insurance; that is, these high ratios are common in industries with high percentages of women in managerial positions. The industries with low ratios of women among employees at the suitable age for management are transport and postal services, electricity, gas, heat supply, and water, and construction; that is, the low

4. In Figure 2, the correlation coefficient for the ratio of employees at the suitable age for management and the managerial ratio is -0.141 .



(a) Construction, (b) Manufacturing, (c) Electricity, gas, heat supply, and water, (d) Information and communications, (e) Transport and postal services, (f) Wholesale and retail trade, (g) Finance and insurance, (h) Real estate and goods rental and leasing, (i) Scientific research, professional and technical services, (j) Accommodations, eating and drinking, (k) Living-related and personal services and amusement services, (l) Education, learning support, (m) Medical, health care, and welfare, (n) Compound services, (o) Services (not elsewhere classified)
 Source: MHLW, *Basic Survey on Wage Structure*, 2016.

Note: The figures represent employees on open-ended contract (male + female) in companies with 100–999 employees, who are at the suitable age for management (aged 40–59).

Figure 3. Relationship between ratio of female employees at the suitable age for management and ratio of women in managerial positions

ratios are found in a number of industries with low ratios of women in managerial positions. Namely, the higher the ratio of women among employees at the suitable age for management (male and female in total), the higher the ratio of women in managerial positions. This is shown as a scatter plot in Figure 3.⁵

To raise the ratio of women in managerial positions in each industry, it is important to increase the ratio of women among employees at the suitable age for management, by facilitating continued employment of women, promoting the conversion of non-regular employees to regular employees,

and hiring mid-career female workers capable for promotion to managerial positions.⁶

Shifting the focus from company “where women shine” to “where managers are happy”

JILPT’s “Survey on Careers and Work-Life Balance Support of Male and Female Regular Employees”⁷ conducted in 2012 also analyzes the tendency among women not to seek managerial positions. Being asked why not seeking managerial positions, many women selected the reason “It will become difficult to balance work and family life,”

5. The correlation coefficient is 0.928.

6. According to *Survey on Hiring, Deployment, Promotion, and Positive Action*, JILPT Research series no. 132, 2014 [only available in Japanese], women hired in mid-career are promoted after fewer years of continued employment in comparison with men (Figure 1-6-2). <http://www.jil.go.jp/institute/research/2014/132.html>.

7. See *Results of the survey on careers and work-life balance support of male and female regular employee (2) Analysis*, JILPT Research series no. 119, 2014 [only available in Japanese] (Figure 4-4-5). http://www.jil.go.jp/institute/research/2014/documents/0119_04.pdf.

Table 3. Wages of section managers and subsection chiefs

(times)

Industry	Companies with 100 employees or more					
	Companies with 100–999 employees			Companies with 100–999 employees		
	Female section manager / Female subsection chief	Female section manager / Male section manager	(Female section manager / Female subsection chief) / (Male section manager / Male subsection chief)	Female section manager / Female subsection chief	Female section manager / Male section manager	(Female section manager / Female subsection chief) / (Male section manager / Male subsection chief)
Industry total	1.241	0.902	1.047	1.211	0.941	1.064
Construction	0.970	0.724	0.777	1.093	0.732	0.972
Manufacturing	1.425	1.038	1.242	1.304	1.047	1.180
Electricity, gas, heat supply, and water	1.242	1.069	1.156	1.970	1.306	1.717
Information and communications	1.309	1.010	1.142	1.388	1.067	1.200
Transport and postal services	1.222	1.054	1.069	1.331	1.050	1.192
Wholesale and retail trade	1.246	0.913	1.040	1.229	0.924	1.069
Finance and insurance	1.419	0.832	1.100	1.327	0.912	1.114
Real estate and goods rental and leasing	1.355	0.998	1.095	1.200	0.941	0.996
Scientific research, professional, and technical services	1.323	0.946	1.113	1.272	0.984	1.139
Accommodations, eating and drinking	1.098	0.822	0.952	1.106	0.843	0.922
Living-related and personal services and amusement services	1.241	0.915	1.064	1.101	0.828	0.953
Education, learning support	1.141	0.942	1.016	1.043	0.864	0.951
Medical, health care, and welfare	1.131	0.844	0.913	1.098	0.908	0.962
Compound services	1.272	0.901	1.139	1.136	0.971	1.039
Services (not elsewhere classified)	1.209	0.942	1.114	1.386	1.012	1.214

Source: MHLW, *Basic Survey on Wage Structure*, 2016.

Note: Regular monthly salary paid to employees on open-ended contract, 40–49 age group.

while many male selected the reason “Advantages are limited or non-existent.” Incidentally, the response “It would mean taking on more responsibility” was selected by almost the same percentage of men and women.

Let us then focus on wages—one of the advantages of being in managerial position—and compared the wages (contractual monthly cash earnings) of section manager and subsection chief at the suitable age for section manager. The analysis looks at age 40–49 as the suitable age for section manager in order to make the effect of “promotion” to managerial positions clear. (If included all relevant ages up to 59 as identified above as the suitable age for management, there would be too many directors and too few subsection chiefs to see the effect of promotion.) If we see a large difference in wages for employees of that age group when promoted to

section manager compared to when remaining at the level of subsection chief, the advantages of rising to a managerial position should be significant.

Table 3 shows three multiples regarding wages for the 40–49 age group in each of the different industries as follows: (i) the wage difference when female subsection chiefs are promoted to section manager, (ii) the wage difference between female section managers and male section managers, and (iii) the difference between the rates at which female subsection chiefs’ wages increase when they are promoted to section manager, in comparison with that for male.

Among companies with 100–999 employees, the industry total shows section managers’ wages are 1.21 times (21.1% higher than) those of subsection chiefs. By industry, while section managers’ wages are higher than those of subsection chiefs in all

industries, that difference is limited in education, learning support, construction, and medical, health care, and welfare. The rate of increase in wages between subsection chief and section manager is higher in industries with relatively low percentages of female employees, namely, electricity, gas, heat supply, and water, services not elsewhere classified, and information and communications.

Comparing section managers' wages by gender, the industry total shows that the wages of female section managers are 6% lower than those of male section managers. By industry, the wages of female section managers are higher in electricity, gas, heat supply, and water, information and communications, transport and postal activities, manufacturing, and services not elsewhere classified. Female section managers' wages are lower than those of male section managers in construction, living-related and personal services and amusement services, accommodations, eating and drinking, education, learning support, and medical, health care, and welfare (in order starting from lowest in comparison). In construction, the wages of female section managers are not even 80% of those of male section managers. In the medical, health care, and welfare, in which the ratio of men and women in managerial positions is almost 1:1, there is a significant difference in wages between men and women.⁸

The industry total shows that the wage increase when a subsection chief is promoted to section manager is 6% higher among women than men. Perhaps this is therefore one of the reasons why more men select "Advantages are limited or non-existent" as a reason for not wishing to be promoted to managerial positions. Looking at the figures for each industry, the rise in wages for women on promotion to section manager is higher than that for men in electricity, gas, heat supply, and water

services not elsewhere classified, information and communications, as well as transport and postal services. Conversely, the rise in wages for women on promotion to section manager is lower than that for men in accommodations, eating and drinking, education, learning support, living-related and personal and amusement services, and medical, health care, and welfare.

The wages may not be the only advantage of being promoted to a managerial position. Another advantage could be the motivation that comes from being put in charge of an organization. Moreover, since managerial employees receive a managerial allowance rather than overtime pay and are free to manage their own working hours, they should easily balance work with their responsibilities at home (albeit, this is probably difficult in reality). To motivate workers to seek promotion to section manager, a higher wage in comparison with that of a subsection chief should be offered. It should be discussed between labor and management as this is an issue regarding wages.

In initiatives aimed at promoting the active participation of women, there should be efforts included to allow a significant number of women to aim for managerial positions with companies' support for the balance between work and family life, as well as efforts to improve working styles and treatments to ensure that managerial positions are attractive status. This would in turn help workers, whether male or female, to feel more motivated and satisfied in their work, and generate positive impacts on business management as well.

AUTHOR

Tamotsu Nagata Former Research Director, The Japan Institute for Labour Policy and Training (JILPT).
Research Interest: Labor Economics.

8. While we can only speculate on the male and female ratios within the respective fields of the medical, health care, and welfare industry, it is conceivable that the medical field has more men at section manager level, while the field of welfare has more women at section manager level.