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Why Such Few Women in Leadership Positions in Japan?

Japan

Kohei Asao, Purva Khera and Mahima Vasishth

SIP/2024/024

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ABSTRACT: The share of women in managerial and leadership roles in Japan – in both the public and private sector – are among the lowest across the globe. This paper empirically examines what drives these large gender gaps in leadership in Japan, using the SVAR model. Results suggest — (i) cultural norms where women take up significantly more burden of household and childcare work; (ii) Japan’s unique employment practices (non-regular employment, long in-person working hours); and (iii) the availability of childcare facilities — are the key drivers. Further progress on workstyle reforms, more flexible labor markets, improving the quality of childcare facilities, and raising paternity leave usage will help close these gaps.

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Prepared by Kohei Asao, Purva Khera and Mahima Vasishth¹

¹ The author would like to thank Yan Carrière-Swallow and the Japanese authorities for providing helpful comments. Mahima Vasishth is a postdoctoral scholar at the Laboratory for Effective Anti-Poverty Policies, Bocconi University.



JAPAN

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April 15, 2024

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Mahima Vasishth (Bocconi University)

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WHY SUCH FEW WOMEN IN LEADERSHIP POSITIONS IN JAPAN?¹

A. Introduction

1. More gender diversity in leadership and management positions is associated with higher productivity, inclusivity, stability, and firm profitability. More gender-balanced boards improve a firm's performance, such as funding obtained, revenues, and profitability due to different risk tolerance and skills brought by men and women, respectively (Peterson Institute for International Economics, 2016; Kim and Starks, 2016). Gender wage gaps are also smaller when there is a higher share of female managers (Theodoropoulos and others, 2022). Moreover, greater representation of women in politics and government organizations has been associated with positive policy outcomes, such as an increase of investment in health and education (Comunale and others, 2023; Hessami and Lopes da Fonseca, 2020).

2. Yet female representation in leadership positions and senior management roles in Japan is among the lowest globally, in both the public and private sectors. While Japan has made considerable progress in achieving higher female employment in the last decade, more than half of women still work in non-regular jobs (that is, part-time and fixed-term with lower wages, job security and skill development) and are severely underrepresented in managerial roles. Lack of women role models can further reinforce negative gender stereotypes, thus creating a self-fulfilling cycle of persistent gender gaps in Japan's labor market.²

3. This paper analyzes the main drivers of persistent gender gaps in leadership in Japan and identifies public policies that can play a role in closing these gaps. Japanese companies with a greater ratio of female managers to total female employees are found to have higher levels of productivity (Nishihata and Yamamoto, 2021), and tend to achieve higher return on equity and return on assets (Ito and Monoe, 2016). Despite its economic relevance, analysis on the drivers of women leaders and managers in Japan is limited. There are a few existing studies, such as Yamaguchi (2013), that use firm-level or survey-based data to identify the key constraints to women's career advancement. These are insightful, but analysis tends to focus on career-related indicators (such as working hours) and does not investigate the linkage with policy change and socio-economic factors. We use both a standard OLS and Structural Vector Autoregression (SVAR) models for our empirical analysis, taking into account various factors that could potentially be playing a role.

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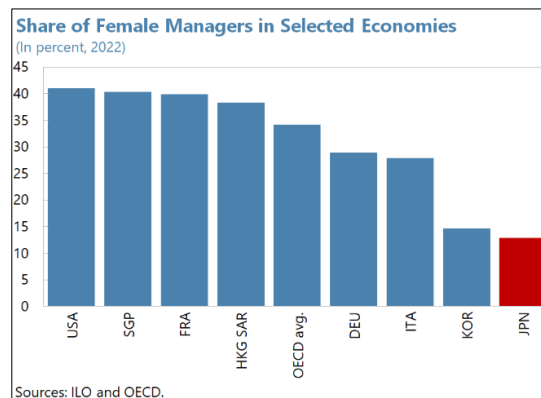
² There is also some [evidence](#) that indicates a multiplier effect among women leaders in the financial services industry, i.e., for every woman added to the leadership of an organization, many other women are inspired to rise to senior leadership roles.

B. Women Leaders and Gender Gaps: Recent Developments

4. Female labor force participation and employment have notably increased in recent years. Japan's female labor-force participation rate (15-64 years old) has been rising steadily in the past four decades, but experienced a notable acceleration from 2012 onwards. The rate surged to 74 percent in 2022 from 63 percent in 2012, while the male labor force participation increased from 84 percent to 87 percent during the same period. The rise in female labor force participation has contributed to the growth of the total labor force in Japan, despite the decline in the total population since 2010, particularly in service industries.

5. However, a majority of women still work in non-regular jobs. As of 2021, 54 percent of female employment is in non-regular jobs with lower wages, poor job security, limited training, and inadequate career advancement opportunities which limits their opportunities for senior managerial roles. The ratio is significantly higher than the 22 percent of male employment in non-regular jobs. In 2021, among the 25-54 age group, there were 4.9 times more women employed in part-time positions than men, while the OECD average stood at 3.6. Japan's gender wage gap of 22 percent (the difference between median earnings of men and women relative to median earnings of men) is 86 percent higher than the OECD average and was the highest among G7 countries in 2021. While men work 29 percent more hours than women in Japan, Hara (2023) shows that the gender wage gap is significantly larger than what can be explained by gender differences in human capital and working hours.

6. Only few women occupy leadership positions in the private and public sectors. While there has been some improvement, the proportion of female workers in managerial roles in the private sector is 13 percent, significantly below the OECD average of 34 percent and the target of 18 percent set by the government. The female managers in the private sector are particularly limited in large corporates. Moreover, the [Tokyo Shoko Research survey](#) shows that only 15 percent of all firms in Japan are owned by women.

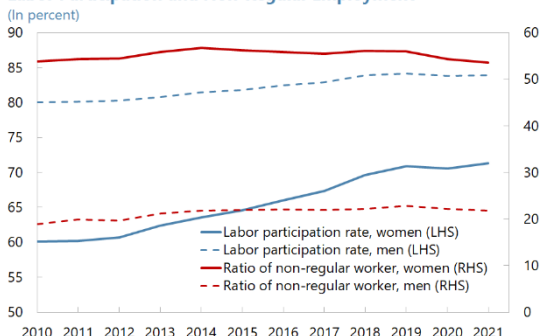


7. Women are also underrepresented in policy-making positions. In the national parliament, the percentage of women in parliament (lower house) is 10 percent with Japan ranking 164th globally. The percentage of women in the upper house is higher at 25.8 percent. In local parliaments, the percentage stands at 15 percent, and the ratio is even lower in rural areas.

Figure 1. Japan: Gender Gaps

Female labor force participation has risen significantly, but a large share are employed as non-regular workers...

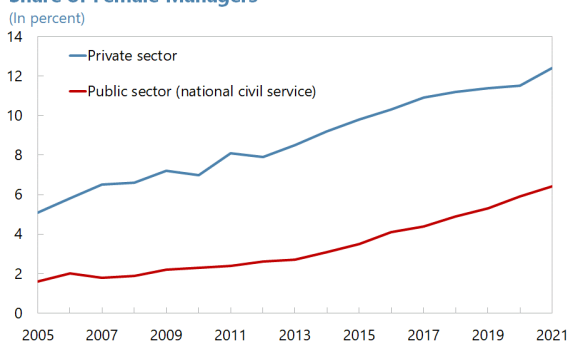
Labor Participation and Non-Regular Employment



Source: MHLW.

While the share of female managers has increased over time...

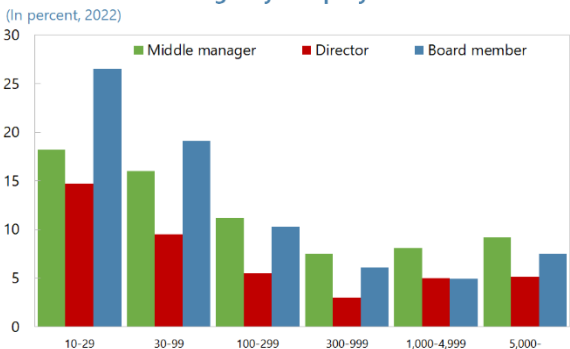
Share of Female Managers



Source: CAS, MHLW. Note: Share of kacho in private sector and honsho-kashitshu in public sector.

The share of female managers is lower in larger corporates.

Share of Female Manager by Company Size

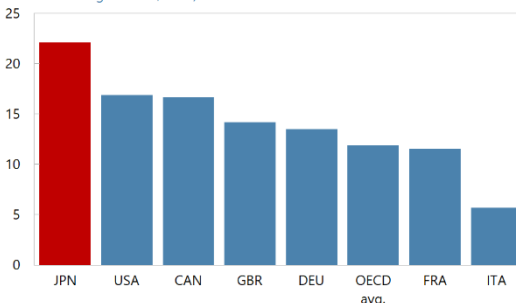


Source: MHLW.

...leading to the widest gender gap in wages among peer economies.

Gender Wage Gap

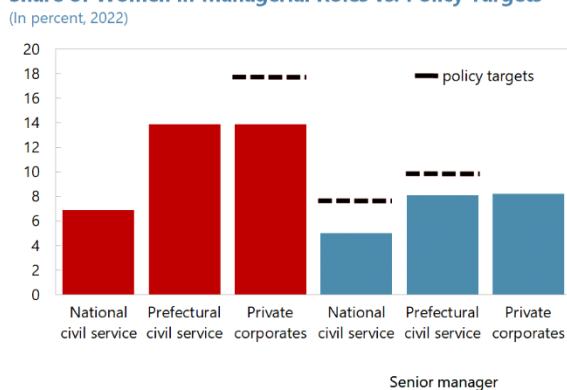
(In percent, difference between median earnings of men and women relative to median earnings of men, 2021)



Source: OECD.

...it still remains low and far below the government's targets.

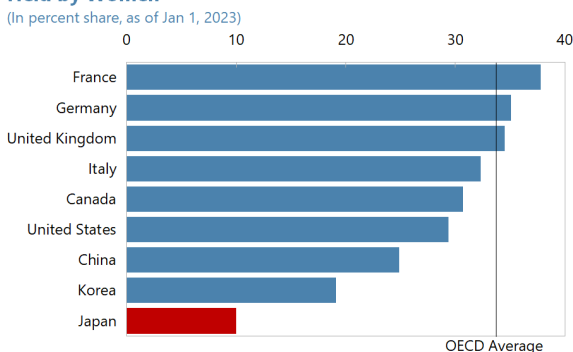
Share of Women in Managerial Roles vs. Policy Targets



Sources: MHLW and CAS.

Representation of women in policy-making positions is also lagging.

Share of Parliamentary Seats in Single or Lower Chamber Held by Women



Source: Inter-Parliament Union.

C. Empirical Analysis: Key Drivers of Gender Gaps in Leadership

The Annex lays out the empirical strategy and Annex Table 2 discusses the underlying data. Annex Table 1 reports the results of the OLS estimation and Figure 3 shows the impulse responses from the SVAR model. The latter approach complements the OLS analysis by assessing the impact of each variable even in the presence of strong correlation.

Results suggest that reducing the large gender gaps in homecare and the quality of employment, and further increasing the availability of public childcare facilities will promote higher share of female managers in the private sector.

Setting of policy targets by the government for achieving higher female representation in managerial roles is also found to be effective in leading to a structural shift towards the intended objective (Annex and para 12). A more detailed discussion is provided below.

Gender Gap in Home- and Family-Care

8. Large gender gaps in housework in Japan are found to be a significant hindrance to women's career growth. This is largely driven by:

- **Cultural norms.** There is a strong persistence of traditional division of labor in which the burden of childcare, elderly-care and household tasks is chiefly borne by women. Women do about 5 times the unpaid work/caregiving than men, while men do about 2 times the paid work than women.
- Limited paternity leave usage. Parental and childcare leave causes career disruptions for women in Japan, in contrast to men who typically continue working. This discrepancy in career continuity leads to an imbalance in career progression, making it challenging for women to attain managerial positions. Although men in Japan have access to up to one year and two months of paternity leave (one of the most generous in the OECD), there is very low take up. Only 17 percent of new fathers take paternity leave, in comparison to 80 percent of women in FY2022, and most take less than one month leave. The second most common reason (25.9 percent) cited for not taking paternity leave is attributed to "the company/supervisor's atmosphere discouraging paternity leave or a lack of understanding about it" (survey conducted by MHLW, 2020³). While the top reason refers to the lower wages during parental leave, [OECD data](#) shows that Japan's average payment rates for paternity leave is 61 percent, which is higher than the G7 average at 45 percent in 2022.⁴

³ Survey available in Japanese: <https://www.mhlw.go.jp/content/11900000/000791048.pdf>

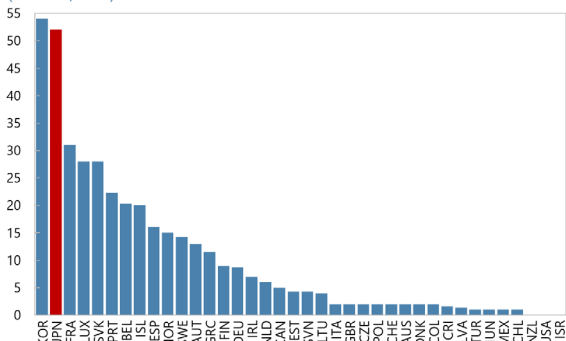
⁴ In May 2023, Prime Minister Kishida announced to raise the effective parental leave payment rates to about 100 percent (if we include the effect of tax/social security premium exemption, otherwise about 80 percent) in the first 180 days if both parents take parental leave. The MHLW plans to implement this measure from FY2025.

Figure 2. Japan: Gender Gap in Home- and Family-Care

Despite having one of the most generous paternal leave allowances...

Paid Family Leave Reserved for Fathers

(In weeks, 2022)

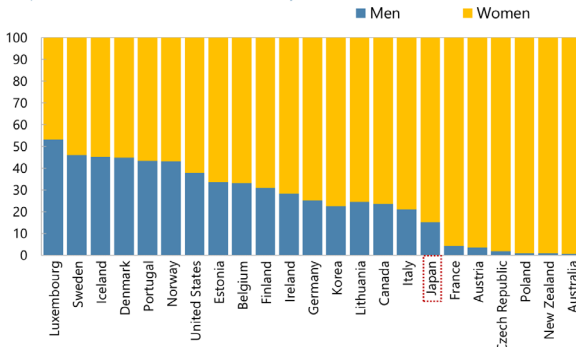


Source: OECD.

...usage by men, although low in several countries, is severely underused in Japan.

Gender Distribution of Users of Parental Leave

(In percent share, 2021 or latest available year)

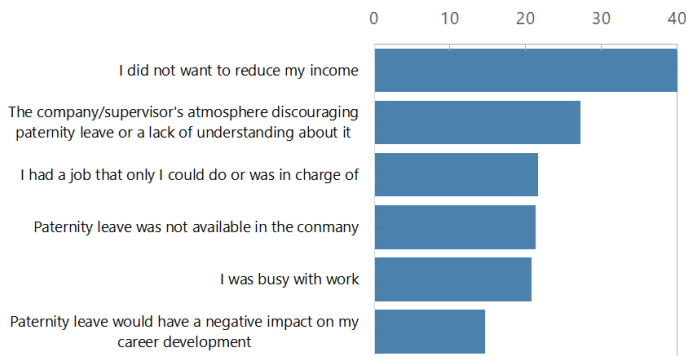


Source: OECD.

Cultural norms and fear of negatively impacting their career and income are the primary drivers of men not using paternity leave

Reasons Why Fathers under Regular Employment Take No Paternity Leave

(In percent, 2020)

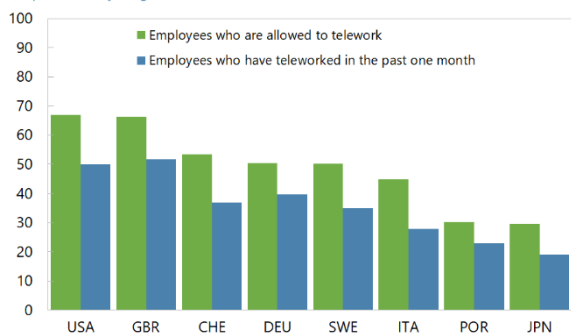


Source: JMA Research Institute (commissioned from MHLW). Note: Multiple answers allowed. Answers marked above 15 percents are listed. (n=409).

Teleworking is not as widespread, making work-life balance challenging...

Share of Tele-working Employees by Country

(In percent, July-August 2023)

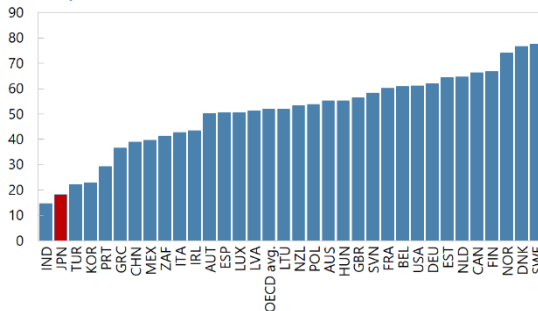


Source: Nomura Research Institute.

...particularly for women due to their disproportionate share of the family care burden.

Gender Gap in Unpaid Work

(In percent of time spent in unpaid work by men relative to by women, latest available year)

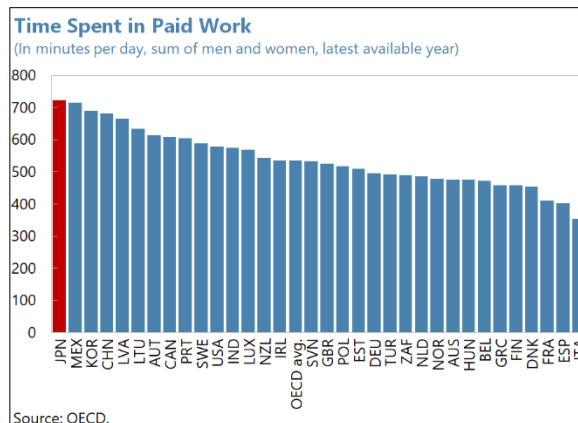


Source: OECD.

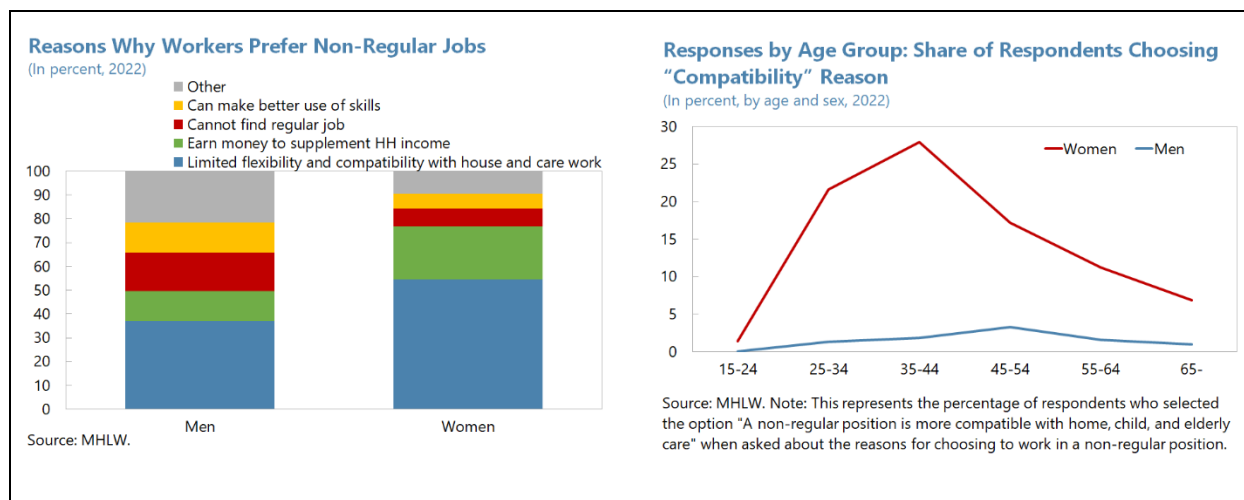
Gender Gap in the Quality of Employment

9. The gender gap in regular full-time employment is also found to negatively impact the share of female managers. This is driven by the following factors:

- The culture of long working hours in regular employment.** Japan ranks at the top among OECD economies in terms of the time spent in paid work. Consequently, women seeking to balance work and homecare responsibilities are often inclined to opt for part-time/non-regular employment. In fact, close to 30 percent of women mentioned “compatibility with household and care-related work” as the main reason for opting for non-regular employment in the age groups of 35-44.⁵



- Limited flexibility in working arrangements.** Low prevalence of telework and requirement of physical presence in the office constrains flexibility in working arrangements (e.g., low prevalence of flexible core working hour). A MHLW survey shows that only 8 percent of Japanese firms have adopted flexible time arrangements for work as of 2022. Yamaguchi (2013) shows that corporates that have better work-life balance tend to have higher female management. This is because enhanced flexibility in work arrangements enables more women, especially mothers, to expand their working hours and assume greater responsibilities.

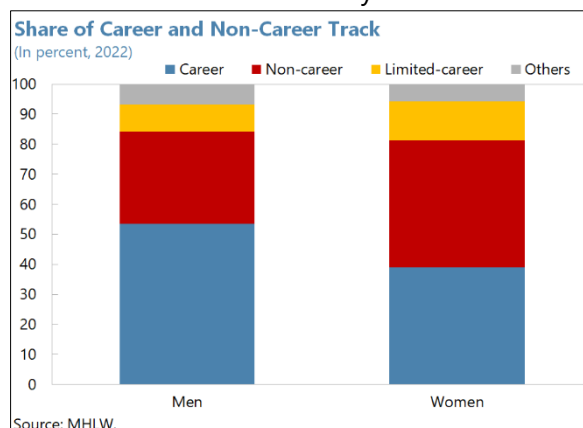


- Policy anomalies.** The distortions created by the current design of benefits in tax and social welfare system for second-income earners (for example, spousal deductions and exemption of pension contributions when income is below a certain threshold) is found to discourage women

⁵ According to a survey by Japan’s MHLW.

from increasing their working hours and hence choosing part-time non-regular employment, consequently restricting their career advancement opportunities (Xu and Chahande, 2023).⁶

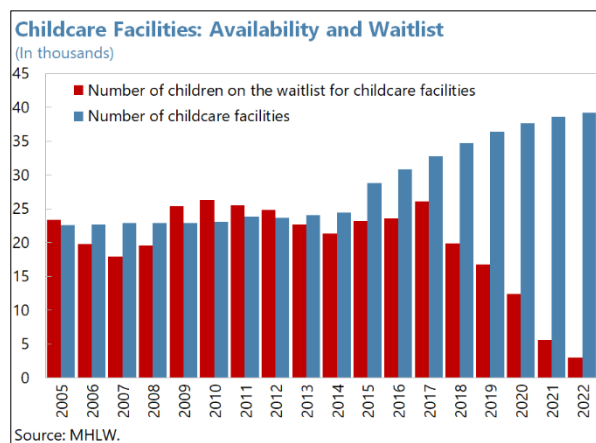
- **The career and non-career tracks systems.**⁷ While this is not a factor that directly obstructs women from obtaining regular employment, it significantly impedes their promotion even within the domain of regular employment. When employees join a company, they typically choose either the career track or the non-career (clerical) track, with limited mobility opportunities between the two. Although both tracks are open to women, men dominate the former, where there is greater opportunity for career advancement.



Childcare Facilities and Allowances

10. The availability of public childcare facilities has improved, and is positively associated with the share of female managers. Recent studies also find a positive relationship between women's economic participation and the provision of childcare facilities. [Asai and others \(2018\)](#) show that childcare facilities use increases mothers' labor supply and earnings in Japan, especially during the initial stages of childcare.

The number of waitlisted children for childcare services in Japan were large and increased by 19 percent from FY2007 to FY2014, while the number of childcare facilities rose only by 7 percent during the same period. The authorities started expanding the availability of childcare facilities in 2015 and strengthened the budget allocation in 2017 to eradicate the waitlist. Consequently, the number of childcare facilities increased by 36 percent from FY2015 to FY2022, and the number of waitlisted children declined significantly.



11. Childcare allowance, on the other hand, is found to not have a statistically significant impact on share of female managers.⁸ Initially introduced in 1972, the allowance amount varies

⁶ Against this background, the authorities have announced new subsidies aimed at eliminating the income discrepancy that arises when annual income exceeds 1.06 million JPY due to social security contributions.

⁷ We do not include this variable in our empirical analysis due to inadequate data availability. There is also 'limited career track' which has restrictions related to geographical working location and/or specific field of work.

⁸ Gender gap in education also does not exhibit a significant impact, given Japan's gender gap in tertiary education is limited.

based on the age and number of children and the income level.⁹ In the literature, there are divergent views about its impact on women’s labor market decisions. Though child allowances could support women’s work-life balance and incentives to work, too much support can adversely affect the incentives for women to enter the labor market (IMF, 2013).

D. Policy Recommendations

As witnessed in the case of Japan, increasing female labor force participation is not sufficient to ensure that women have good jobs and good careers. To foster the advancement of women into managerial and leadership positions, policy efforts need acceleration in the following areas:

12. While the government has set targets for representation of women in managerial roles, which is welcome, stricter enforcement and a broader coverage is found to be more effective. The Japanese government has set a target of having women occupy at least 30 percent of executive positions in private firms by 2030, modified from the initial target by 2020.¹⁰ However, this is only limited to TSE listed companies on the prime market which employ a very small share of Japan’s total labor force (less than 5 percent). These targets are also voluntary in nature, i.e., require firms to strengthen their own regulatory compliance with no strict penalties for not meeting these targets. OECD (2020) finds that countries that have adopted a mandatory quota have seen a more immediate increase in the number of women on boards and those that have taken a “softer” approach, using disclosure rules or targets, have seen a more gradual increase over time. The top five performer countries in women leaders (Finland, France, Italy, Norway, and Sweden) have all implemented mandatory quotas.¹¹

13. Reforming current employment practices and policies are essential for improving women’s quality of jobs. This will also help increase productivity, wages and advance a more equal society. First, further progress should be made on work-style reforms, such as encouraging the use of flexible working schedules and teleworking options. This would allow men and women to better share the responsibilities of housework and consequently encourage more women to work in regular employment. Second, linking promotions to merit instead of seniority and years of service will enable women to achieve better career advancement, even if their work commitment temporarily slows down due to family reasons. It will also encourage men to take childcare leave without worrying about jeopardizing their career advancement. Third, spousal benefits in tax and social security contributions should be rationalized to avoid disincentivizing women from increasing their labor supply. Fourth, the career track system should offer significantly increased flexibility,

⁹ Currently, the benefit amounts are: ¥15,000 per month per child under 3 years old; ¥10,000 per child or ¥15,000 for the third child and onwards per child from 3 years old until the child graduates from elementary school; and ¥10,000 per child for junior high school aged children. Moreover, the government has decided to abolish any household income level thresholds starting from 2024, thus making all households eligible for this allowance, to bolster fertility support.

¹⁰ Numerical targets are part of TSE listing rules and the government recommends that TSE listed companies create action plans for fulfilling these targets.

¹¹ Overall, 12 OECD countries have established mandatory quotas, including five (Denmark, Iceland, Norway, France, and Spain) requiring at least 40 percent participation of women on boards.

allowing women (and men) initially employed in non-career tracks the option to transition to career-track positions.

14. Raising usage of and introducing more flexibility in paternal leave is critical to promote work-life balance for both men and women. The government is trying to increase the share of men taking paternity leave to 85 percent by FY2030, modified from the initial target of 30 percent by FY2025.¹² Additional paternity leave incentives were introduced in October 2022, allowing fathers to take four weeks off in the first eight weeks post-childbirth with effective income substitution rate at 80 percent (100 percent from FY2025), with additional financial incentives if both parents take leave.¹³ While this may help partially, considering that cultural pressure and a lack of understanding is also a major reason for men not taking parental leave, encouraging a cultural shift is also essential. Recent measures that made it mandatory for employers to individually explain parental leave and relevant policies to employees with the aim of encouraging its adoption (April 2022), and the new requirement for companies to annually disclose the status of childcare leave taken (since April 2023 for companies with over 1,000 full-time employees) are welcome. For parents who may be unwilling or unable to stop work completely, flexible or part-time leave arrangements may provide a solution. Such arrangements can allow individuals to remain connected to their jobs while caring for children. Employers may benefit too: they may not have to incur the cost of finding and hiring a replacement worker if the employee is on leave only part-time (OECD, 2016). Some other countries, such as Spain and France, have made paternity leave “mandatory” which has proved to be favorable for women’s economic participation (Farré and González, 2017).

15. At the same time, further expanding childcare facilities supported by attracting foreign workers will help. While access to childcare facilities has indeed improved since 2015, it is worth noting that the waitlist numbers might be underrepresented since some children could be excluded from the statistics in certain cases.¹⁴ This suggests that there is a need for continuous efforts to further expand childcare facilities. The current bottleneck lies in the shortage of nursery teachers which is driven by their relatively low wages—the average monthly wage of a nursery teacher is 17 percent lower than an average full-time employee. The authorities should persist in their efforts to increase nursery teacher wages while also attract foreign workers to further help address these labor shortages.

16. Raising childcare allowance is unlikely to encourage women’s leadership. Changes in the childcare allowance have demonstrated limited impact on women’s career advancement, as well as on fertility rate (see *2024 Japan Article IV Selected Issues Paper “Japan’s Fertility: More Children Please”*). Social norms and deeply entrenched labor/employment practices are more fundamental drivers. Policy support should pivot from the current focus on strengthening financial assistance to addressing the structural issues mentioned.

¹² The authorities initially established the numerical target of 30 percent to be achieved by FY2025; however, in March 2023, the Prime Minister modified this target.

¹³ Women get 8 weeks off with nearly full income substitution.

¹⁴ For instance, children whose parents are on parental leave are excluded from the waitlist. This means that if parents are taking leave because they cannot find appropriate childcare facilities (parents can extend their parental leave beyond the standard one year to the maximum period of two years), these children will not be included in the waitlist count.

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Annex I. Empirical Analysis

To identify the drivers of gender gaps in managerial roles, the following OLS equation is estimated using available annual data on Japan from 2001-21:

$$female_managers_t = \alpha + \beta_0 Policy + \beta_i X_{i,t-1} + \varepsilon_t$$

where the share of female managers in the private sector is the dependent variable defined as the share of female middle (*kacho*)/senior (*bucho*) managers over all middle/senior managers. Following the literature, our regressors (X) include gender gap in homecare, gender gap in regular employment, gender gap in tertiary education, usage of childcare facilities, and the relative size of the childcare allowance (see Table 2 for the detail of each variable). We also include a policy dummy variable to take account of the structural shift after the 2013 introduction of the government's target of achieving a 30 percent female management ratio by 2020.

Table 1 below presents the results of the OLS regressions. While an OLS analysis is useful, it may suffer from endogeneity issues, with the direction of causality unclear. To tackle these issues:

- All regressors are lagged one period.

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Gender gap in homecare	-2.992*** (0.171)	-3.183*** (0.163)	-1.194** (0.446)	-3.166*** (0.215)	-1.799*** (0.349)	-2.432*** (0.158)	-1.534*** (0.371)	-1.555*** (0.381)	
Gender gap in regular employment		30.43** (11.07)	6.315 (9.221)	29.28* (14.79)	19.33** (7.275)	25.72*** (7.835)	9.869 (9.068)	14.11 (11.83)	-17.54 (12.78)
Childcare facilities			0.124*** (0.0269)		0.0542** (0.0255)		0.0658** (0.0253)	0.0454 (0.0437)	0.157*** (0.0489)
Childcare allowance				0.0452 (0.371)		0.155 (0.197)	0.285 (0.176)	0.298 (0.181)	0.612** (0.235)
Policy change dummy					1.026*** (0.246)	1.383*** (0.206)	0.978*** (0.236)	0.974*** (0.241)	0.559* (0.313)
Gender gap in tertiary education								3.734 (6.471)	1.278 (9.212)
Observations	21	21	21	21	21	21	21	21	21
R-squared	0.942	0.959	0.982	0.959	0.991	0.989	0.993	0.993	0.984

Standard errors are in parentheses. All regressions include a constant term.
*, **, *** denote statistical significance at the 1, 5 and 10 percent level.

- We complement the analysis with a SVAR model as it allows to study a more causal interpretation of the relationship between variables by isolating and identifying the direct impacts of specific exogenous shocks. This helps us assess the effects of each factor in the presence of strong correlation (Sims, 1980; Guo, 2013; Kinoshita and Guo, 2015). We use a non-recursive four-variable model with the following variables which are found to be statistically significant drivers in the OLS analysis: share of women managers, gender gap in regular work, gender gap in time spent in household work, and availability of childcare facilities.

We estimate a short-run recursive SVAR model (Sims, 1980) to identify the impulse response function, as follows:

$$A(IK - A_1L_1 - A_2L_2 - \dots - A_nL_n)y_t = A\epsilon_t = Be_t$$

where L is the lag operator; A , B , and A_1, \dots, A_n are $K \times K$ matrices of parameters; ϵ_t is a $K \times 1$ vector of errors with $\epsilon_t \sim N(0, \Sigma)$ and $E[\epsilon_t \epsilon'_s] = 0_K$ for all $s \neq t$; and e_t is a $K \times 1$ vector of orthogonalized disturbances; that is, $e_t \sim N(0, I_K)$ and $E[e_t e'_s] = 0_K$ for all $s \neq t$. The transformations of the errors allow us to analyze the dynamics of the system in terms of a change to a variable of e_t .

We identify this short-run SVAR model by placing restrictions on A and B , which are assumed to be nonsingular.

The above equation implies that:

$$P = A^{-1}B$$

Where P is the matrix identified by the model.

This implies:

$$A\epsilon_t\epsilon'_tA' = B\epsilon_t\epsilon'_tB'$$

Taking the expectation of both sides gives us:

$$\Sigma = PP'$$

Assuming that the underlying VAR is stable, we can invert the autoregressive representation of the above model to an infinite-order, moving-average representation of the form:

$$y_t = \mu + \sum_{s=0}^{\infty} \Phi_s e_{t-s}$$

where y_t is in terms of the mutually orthogonal, unit-variance structural errors e_t .

The Φ contain the structural IRFs at time period s . μ is a vector of constants.

In a short-run SVAR model, the A and B matrices model all the information about contemporaneous correlations. The B matrix scales the error u_t to have unit variance. This allows the interpretation of the structural IRFs as: the effect on variable i of a one-time unit increase in the structural error to variable j after s periods.

We define the matrices A and B as follows:

$$A = \begin{pmatrix} 1 & 0 & 0 & 0 \\ \cdot & 1 & 0 & 0 \\ \cdot & \cdot & 1 & 0 \\ \cdot & \cdot & \cdot & 1 \end{pmatrix}; \text{ and } B = \begin{pmatrix} \cdot & 0 & 0 & 0 \\ 0 & \cdot & 0 & 0 \\ 0 & 0 & \cdot & 0 \\ 0 & 0 & 0 & \cdot \end{pmatrix}$$

These matrices correspond to the following structural restrictions and contemporaneous relationships:

$$\begin{bmatrix} \epsilon_{\text{gender gap in household work}} \\ \epsilon_{\text{availability of childcare facilities}} \\ \epsilon_{\text{gender gap in regular work}} \\ \epsilon_{\text{share of women managers}} \end{bmatrix} = \begin{bmatrix} 1 & 0 & 0 & 0 \\ a_{21} & 1 & 0 & 0 \\ a_{31} & a_{32} & 1 & 0 \\ a_{41} & a_{42} & a_{43} & 1 \end{bmatrix} \begin{bmatrix} \epsilon_{\text{gender gap in household work}} \\ \epsilon_{\text{availability of childcare facilities}} \\ \epsilon_{\text{gender gap in regular work}} \\ \epsilon_{\text{share of women managers}} \end{bmatrix}$$

The restrictions above are based on the empirical literature including our findings from the above OLS analysis: we assume that the share of women managers in Japan, at any point in time, is a function of the gender gap in time spent in unpaid household work (Dunatchik and Ozcan, 2021), the availability of childcare facilities (Dang, Hiraga and Nguyen, 2022), and the gender gap in regular work (Yamaguchi, 2019).

Figure 3 reports the impulse responses over a four-year horizon (red solid line), and the upper and lower dotted lines represent two standard confidence bands around the estimations that are constructed by Monte Carlo simulation. The vertical axis shows the percentage change in share of women leaders with the respective 1-unit shock over time. We find that the magnitude and the statistical significance of the estimated impulse responses are robust to alternative specifications and restrictions of the SVAR model.

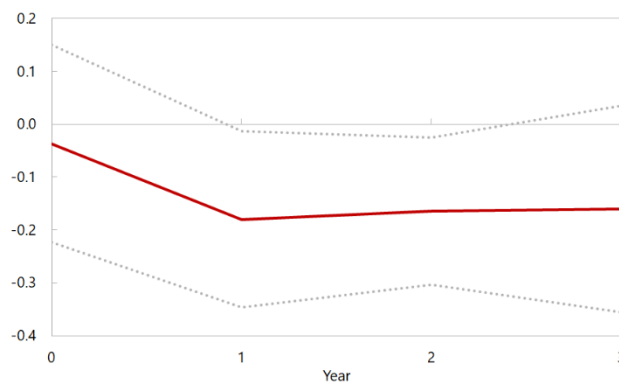
Results suggest that a 1 unit increase in the gender gap in house-work (i.e., if women spend 6 times as much time in house-work relative to men, up from 5) decreases the share of women leaders and has a relatively persistent impact. A 1 percentage point increase in the coverage of childcare facilities leads to an increase in the share of women leaders. Lastly, an increase in the relative regular employment of women vis-à-vis men also has a positive impact, although it is not statistically significant.

Figure AI.1. Japan: Impulse Responses of Share of Female Managers

An increase in the gender gap in unpaid work at home has a negative impact on the share of female managers

Unpaid Work at Home Shock

(In percentage point)

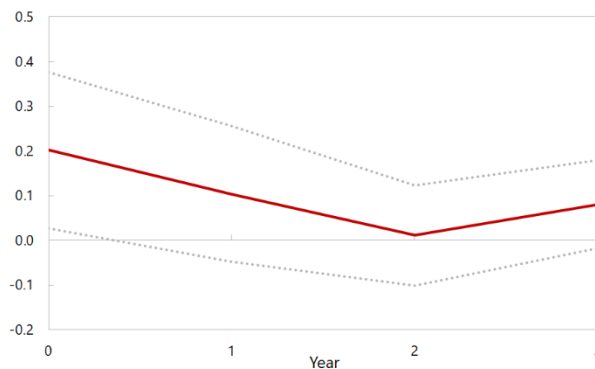


Source: IMF staff estimations. Note: The dotted lines show 95 percent confidence intervals.

An increase in childcare facilities has a positive impact on the share of female managers

Childcare Facilities Shock

(In percentage point)

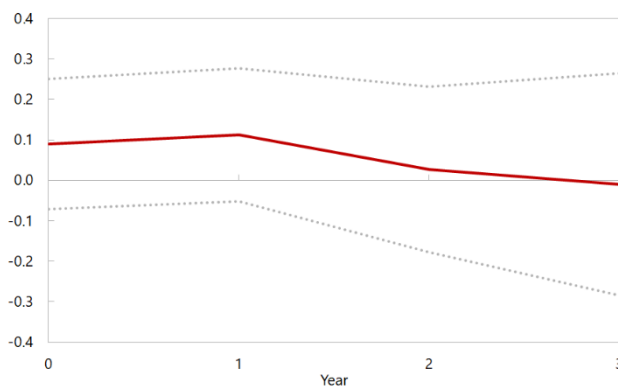


Source: IMF staff estimations. Note: The dotted lines show 95 percent confidence intervals.

A relative increase in women's regular employment vis-à-vis men increases the share of women in managerial positions

Regular Employment Shock

(In percentage point)



Source: IMF staff estimations. Note: The dotted lines show 95 percent confidence intervals.

Table A1.2. Japan: Data

<i>Variable</i>	<i>Description</i>	<i>Data source</i>
Share of female managers	This is the dependent variable which is defined as the share of female middle/senior managers over total middle/senior managers in the private sector. ¹	Ministry of Health, Labour and Welfare.
Gender gap in homecare	The difference between the time for household-related work per day by women and men, divided by the time for household-related work per day by men.	Ministry of Internal Affairs and Communications.
Gender gap in regular employment	The difference between proportion of regular employees among women and men, divided by the proportion of regular employees among men.	Ministry of Internal Affairs and Communications.
Gender gap in tertiary education	The difference in university enrollment rate among women and men, divided by the university enrollment rate among men.	Ministry of Education, Culture, Sports, Science and Technology.
Availability of childcare facilities	The ratio of children (1-2year old) using childcare facilities over total population of children in this age.	Ministry of Health, Labour and Welfare.
Child allowances	The ratio of child rearing allowances provided by the government to total social security benefits. ²	Japan's National Institute of Population and Social Security Research
Policy	A dummy variable that takes the value of 1 when the year is 2014 or later, and 0 otherwise. "Japan Revitalization Plan" released in June 2013 set a target aiming for a 30 percent share of managers to be females by 2020.	
<p>¹ Junior manager (section chief; <i>Kakaricho</i>) is not included since a section chief in Japan typically oversees only a few members, if any, and is not considered a managerial position in some cases.</p> <p>² The amount of total social security benefits is based on ILO standards, and other detail of the assumption follows the Financial Statistics of Social Security.</p>		