

Gender Inequality in Access to Managerial Positions in Japan from a Cross-National Comparative Perspective: The Role of Labor Markets and Welfare States

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This paper addresses the cross-national variations in the levels of gender inequality in access to managerial positions and explores the role of state-level institutions generating those differences. More specifically, we adopt the “varieties of capitalism” approach in addressing the questions of how the development of human capital affects the transition to higher-status positions or promotions to managerial positions within an organization, and what kinds of mechanisms produce the gender disparity in the opportunities to develop firm-specific skills. We go on to highlight the “welfare state paradox” and explore how in Nordic countries the typical family and welfare policies aimed at boosting women’s participation in the labor market and supporting their employment are paradoxically precluding women from being promoted to managerial positions. In doing so, we address two factors: firstly, the impacts that the family and welfare policies themselves have on women’s promotions, and secondly, the effects of the expansion of women’s employment in the care-related services of the public sector on women’s promotions. In light of the observations, we investigate the trends in the proportion of women in managerial positions in the US, Europe, Japan and other Asian countries since 2000 based on the data obtained from the International Labour Organization database. Finally, we build on the findings of this cross-national comparative approach to explore the developments regarding the gender gap in promotions to managerial positions in Japan, based on the results of analysis using the data from the 2015 Social Stratification and Social Mobility survey.

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I. Introduction

In social stratification research, considerable interest is directed at revealing the unequal distribution of socioeconomic resources by looking at their linkage with social status and the various institutions behind it. The stratification approach to exploring gender inequality in labor markets allows us to adopt various perspectives in our analysis. For instance, while men who are expected to play a breadwinner role will continue working regardless of their family circumstances, women who are expected to do household chores tend to

leave the labor market when they have young children. This leads to the substantial gender gap in labor force participation.

In recent years, many countries see an increase in the employment rates of women and a rise in women's continuous commitments to the labor market, due to family and labor market policies by welfare states and the organizational measures to support combining work and family life. However, this is not to suggest that the increase in the employment rate of women entirely eradicates the inequality between men and women. In the field of social stratification research, the emerging occupational distinction between men and women is referred to as "occupational gender segregation." There are significant gender differences in occupations and work and such differences in occupation lead to considerable discrepancies in subsequent careers, possibility of promotions, and wages (Charles and Grusky 2004; Grusky and Levanon 2006; Jarman et al. 1999).

In Japanese society, on the other hand, the degree of gender occupational segregation is relatively small in comparison with other countries. Nevertheless, the extent of gender inequality may be underestimated if the focus is exclusively on occupation (Shirahase and Ishida 1994). This underestimation, for instance, occurs when it comes to the occupation category *jimushoku*: a clerical and administrative job in an organization. Even if women is employed in this occupational category as well as men, the specific treatment that they receive from their employer differs significantly by gender. In the Japanese organizational setting, the clerical jobs are distinguished between jobs in a career track (*sougoushoku*) and those in a non-career track (*ippanshoku*). As clerical workers in a career track have more training opportunities to develop firm-specific skills in their organization, these workers are more likely to climb up corporate ladders and finally become managers. When clerical workers are hired on a non-career track, they are assigned easier and routine tasks that do not require on-the-job training. These jobs involved little prospects for promotions (Konno 2000). In recent years, enterprises often fill jobs in a non-career track by employing non-regular workers, such as temporary staff dispatched from agencies or employees with the fixed-term contract. This means that while they may belong to the same occupational category, men and women have significantly different prospects for subsequent promotions.

In many advanced countries, the employment rate of women is continuously rising, and, in that sense, gender inequality is diminishing. And yet, in the case of socio-economically high-status positions, gender inequality firmly persists. In contemporary industrial societies, professional or managerial jobs have higher levels of autonomy in their work in comparison with other types of jobs and in turn receive higher wages and job stability from employers (Goldthorpe 2007). Such disparities in access to higher socioeconomic positions form the principal component of gender pay gaps (Mandel 2012; Mandel and Shalev 2009). Likewise, in Japanese society these gender gaps in managerial positions are an area of gender inequality where the levels of disparity are particularly high (Yamaguchi 2017).

This paper addresses the gender inequality in access to managerial positions from the cross-national comparative perspective. We draw on previous research on European countries to discuss the key issues regarding the roles the differing institutions in each country play in forming and maintaining gender inequality in access to authority in an organizational setting. Having done so, we then refer to our own analysis utilizing data from the 2015 Social Stratification and Social Mobility survey (the SSM Survey) to investigate gender inequality in transition into managerial positions in Japanese society.

II. The role of human capital development

Stratification researchers have often addressed the question of how the systems that Japanese enterprises guarantee for regular employees—such as long-term stable employment and seniority-based wages—have formed gender inequality in the labor market. Mary Brinton argues that enterprise-based skills and human capital development systems are decisively important predictors for gender inequality in Japanese society (Brinton 1993).

Drawing on the terms adopted by Gary Becker, this paper uses “general skills” to refer to skills that can be acquired at an external educational institution or from vocational trainings provided by public employment agencies or other institutions, and those skills can be transferred across organizations. Meanwhile, “firm-specific skills” refer to skills that can only be applied at a certain enterprise. As it is difficult to hire workers with firm-specific skills from outside of an organization, a personnel with the relevant skills must be trained internally. Given the costs involved in developing firm-specific skills, if workers leave their employment after a short period of time, the enterprise is no longer able to recoup those costs, rendering internal personnel development inefficient. Namely, to develop firm-specific skills across workers efficiently, enterprises need to deter workers from changing employers and maintain and continue the employment relationships with those workers over a long period of time (Becker 1964). Long-term stable employment, seniority-based wages, and welfare programs provided by employers played significant roles in deterring workers from changing employers and developing long-term employment relationships.

In contrast, employers tend to assign workers, who are likely to leave their employment after a short period of time, to departments and roles that do not require advanced skills, because employers cannot gain the financial returns to human capital investment. If an enterprise determines, based on the gender-based allocation of work and family responsibilities, that women are on average highly likely to leave their employment after a short period of time to become homemakers or raise their children, enterprise will not invest in skill development for women, and instead assign them to more routine tasks not requiring advanced knowledge or expertise (Yamaguchi 2017).

In their approach to cross-national comparative research of human capital development and gender inequality among workers, Estévez-Abe et al. draw on the “varieties of capitalism” theory (Estévez-Abe, Iversen and Soskice 2001; Estévez-Abe 2006). Placing the central focus of analysis on enterprises, the varieties of capitalism theory addresses the differing approaches to fiscal and monetary policy, labor market policy, and skills development between liberal market economies (LMEs)—economies relying on market mechanisms—and coordinated market economies (CMEs)—economies using non-market forms of coordination mechanisms. It also highlights that the approach does not assume one particular type of non-market coordination mechanism but rather that each country assembles a variety of coordination measures (Hall and Soskice 2001).

Estévez-Abe et al. suggest that where there is uncertainty regarding the prospects for the employment in an enterprise or the current work, workers themselves are unlikely to invest in the development of firm-specific skills and industry-specific skills, and likely to actively invest in knowledge and skills that they can also transfer across different organizations or industries. In contrast, where there are high levels of employment protection in the form of strict regulations on dismissal and other such measures developed through government policies and labor-management bargaining, both workers and enterprises feel comfortable to invest in the development of firm- and industry-specific skills, given the assumption that they will maintain a long-term employment relationship (Estévez-Abe, Iversen and Soskice 2001). A long-term employment relationship between the worker and the enterprise is a prerequisite for firm-specific skills because such skills are developed through on-the-job training (OJT). This situation hinders organizations from providing training for women, who are anticipated to have a high rate of turnover due to the greater family responsibility among married women. This means fewer possibilities for enterprise-based training opportunities and promotions for women, creating a significant gender gap in transitions into managerial positions or other such higher-status positions in the enterprise (Estévez-Abe 2006).

In contrast, in countries with LMEs, neither workers nor firms operate on the assumption of a long-term employment relationship, and the emphasis is placed on the development of general skills not specific to a particular enterprise or industry. Schools and other educational institutions are expected to fulfill a significant role in the development of professional skills for workers, and there is less institutional gender inequality in access to education and training in schools. As a result, it seems that there is less gender inequality in LMEs (Estévez-Abe 2006; Estévez-Abe et al. 2001).

III. Welfare states and women's employment

The previous section discussed women's employment from the perspective of human capital development, the employment practices that enterprises adopt to support it, and the state employment policies that complement those practices. In this section, we explore the kinds of impacts that the state-level welfare and family policies have on women's employment and occupational attainments.

Hadas Mandel and her collaborators reveal how the welfare state support for women's employment as typically seen in Nordic countries affects gender inequality in occupational attainments (Mandel and Semyonov 2006; Rosenfeld, Van Buren and Kalleberg 1998; Yaish and Stier 2009). When doing so, it is important to focus on two aspects of welfare states. Firstly, welfare states develop support systems for families with children, providing cash benefits and care services. By taking responsibility for providing care for small children, the state government promotes women's employment, and provides families with the conditions that allow them to combine work and family life. Secondly, to provide direct care services in the public sector, the welfare state employs a large number of women. Looking at the first of these two aspects, the family policies implemented in Nordic countries, which provide universal services for working mothers, have allowed more women with young children to work (Esping-Andersen 1999). And in terms of the second, by employing many women to provide various services to women, welfare states directly generate new employment opportunities.

Both family policies and job creation for women in the public sector have significantly increased women's participation in the labor market. In fact, the rates of women's participation in the labor market are higher in Nordic countries with social democratic regimes, whereby the state universally provides services for citizens, as opposed to liberal countries such as the UK or the US, where the provision of welfare by the state is minimal and residual, and emphasis is placed on the allocation of resources through market mechanisms (Esping-Andersen 1999). In other words, the states in the liberal regime only provide welfare benefits for poor people who cannot gain resources from market.

On the other hand, the family policies that support women's employment do not necessarily encourage the transition of women into managerial positions and other such higher-status positions within an organization. For instance, while paid maternity leave and childcare leave maintain the mother's connection with the labor market and guarantee the mother's right to return to employment, long-term leave may lead women to lose an opportunity to pursue their career and acquire work-related skills. In addition, in Nordic countries, equal treatment for part-time employment and full-time employment is prescribed by law, such that companies are obliged to provide the same employee benefits to workers on shorter working hours as they would to full-time workers, resulting in comparatively fewer disadvantages to working shorter hours. Women with young children therefore tend to choose to work part-time or shorter hours in order to combine work and family life, and consequently lose their opportunities for access to skill development within enterprises (Dämmrich and Blossfeld 2017; Abendroth, Maas and van der Lippe 2013; Mandel and Semyonov 2006).

Such circumstances may hinder employers from assigning women to managerial positions. For employees who are to be promoted to managerial positions, OJT is extremely important, and working reduced hours or taking long periods of leave due to childbirth or raising children may present difficulties for receiving such education and training while working. Employers regard female workers, who have limited opportunities to develop firm-specific skills, as less productive and thereby justify the discriminatory practice against women. Thus, this leads to the possibility of greater gender inequality in occupational attainment (Mandel and Semyonov 2006; Dämmrich and Blossfeld 2017).

The expansion of women's employment in the public sector may also exacerbate occupational gender segregation. The rise in women engaged in providing care-related services may hinder women from progressing into other occupations, such as positions in the private sector. This situation causes women to choose lower-paid jobs providing care and thereby constrain their occupational choices, which in turn may prevent women from achieving a higher socioeconomic status in an organization. The expansion of women's

employment by the welfare state does not thus serve to change the existing gender inequality in labor markets, but rather strengthen women's care roles, which was provided by a woman in a family (Yaish and Stier 2009; Mandel and Semyonov 2006).

The discussion above has primarily focused on the concept that the institutional and structural conditions at a state level place certain limitations on women's possibilities of promotions and consequently generate gender inequality in occupational attainment. Conversely, the institutional and structural conditions addressed thus far may impact upon individual preferences and choices, and lead women to accept gender inequality in family responsibilities. The intersection between macro-level institutions and individual actions reproduces gender inequality in family responsibilities. For instance, the active care provision for infants and preschool children by the welfare state encourages women to return to work after childbirth. However, as the family policies of the welfare state do not cover all housework and childcare responsibilities, women who feel they are responsible for housework and childcare are unable to focus exclusively on their work as would be required to secure a promotion to a managerial position. The care provision for infants and preschool children by the welfare state therefore may encourage women not only to attain higher status or earn more wages but also to take women's roles for family responsibilities while they work. This tendency may be particularly prominent in the societies where it is typical for women to work part-time and the societies in which women's employment in the public sector is common. For women who are less proactive in their career aspirations and do not have ambitions of promotions to managerial positions, preferring to prioritize combining work and family life, employment in the public sector and part-time employment are highly attractive options. Women who do not actively seek promotions to managerial positions select themselves into a labor market sector in which they are able to combine work and family life, thereby further enforcing the "welfare state paradox" that seeks to support women's employment (Yaish and Stier 2009; Dämmrich and Blossfeld 2017; Mandel and Semyonov 2006).

IV. Trends in the proportion of women in managerial positions in each country since 2000

In this section, based on the discussion in the previous sections, we provide an overview of the trends in the proportion of women in managerial positions in each country since 2000 by using the International Labour Organization (ILO) database (Figure 1).¹ The proportion of women in managerial positions refers to the number of women in managerial positions among the total number of men and women in managerial positions. Here "managerial positions" refers to positions that fall under Major Group 1 ("Managers") of the International Standard Classification of Occupations (ISCO-08 or ISCO-88). Figure 1 presents data from those countries recorded on the ILO database that are OECD member countries, with only the major countries highlighted. As the figure shows, while the proportion of women in managerial positions is on the increase overall, the level of increase differs significantly from country to country, apparently influenced by the institutional factors in each country.

In countries with LMEs, such as the US (USA), Canada (CAN), Australia (AUS) and the UK (GBR), the proportion of women in managerial positions are relatively high. The proportion of women in managerial positions as of 2000 was 36% in the US, 36% in Canada, 30% in Australia, and 35% in the UK. These percentages further increased to 41% in the US and 37% in Australia in 2019, showing a continuing shrinkage of gender inequality in managerial positions in recent years. As noted in Section II, both organizations and workers in these LME countries regard the development of general skills as critical and important. As schools provide opportunities for enhancing this type of skills, gender inequality in access to education and training is relatively low. In such cases, personnel evaluations concerning promotions to managerial positions would naturally place greater importance on not only the accumulation of human capital in internal labor markets, but also general skills acquired through external labor markets and educational institutions. Therefore, it is considered that the institutional barriers hampering women's promotions to managerial positions are lower in

LME countries, given that career interruptions or skills development patterns specific to women are less disadvantageous in those countries.

On the other hand, the social democratic CME countries, which have generally succeeded in ensuring high levels of women's labor market participation (the Nordic welfare states), do not necessarily have an extremely high proportion of women in managerial positions in comparison with LME countries. The proportions of women in managerial positions in 2000 in Sweden (SWE) and Denmark (DNK) were 31% and 24%, respectively. They are lower than those of the LME countries for that time. In Finland (FIN) and Norway (NOR), the proportions of women in managerial positions in 2000 were also lower than LME countries (27% and 25%, respectively). This shows that, as argued in previous research, while the social democratic countries in the early 2000s had achieved gender equality in the labor market overall, there was a paradoxical rise in gender inequality in high-status positions. However, in the subsequent 20 years or so, the proportions of women in managerial positions in the three countries excluding Denmark rose by around 10 percentage points. This indicates, at least according to such macro statistics, that the welfare state paradox was being eradicated in more recent years (in 2019, the proportions of women in managerial positions were 40% in Sweden, 27% in Denmark, 37% in Finland, and 35% in Norway).

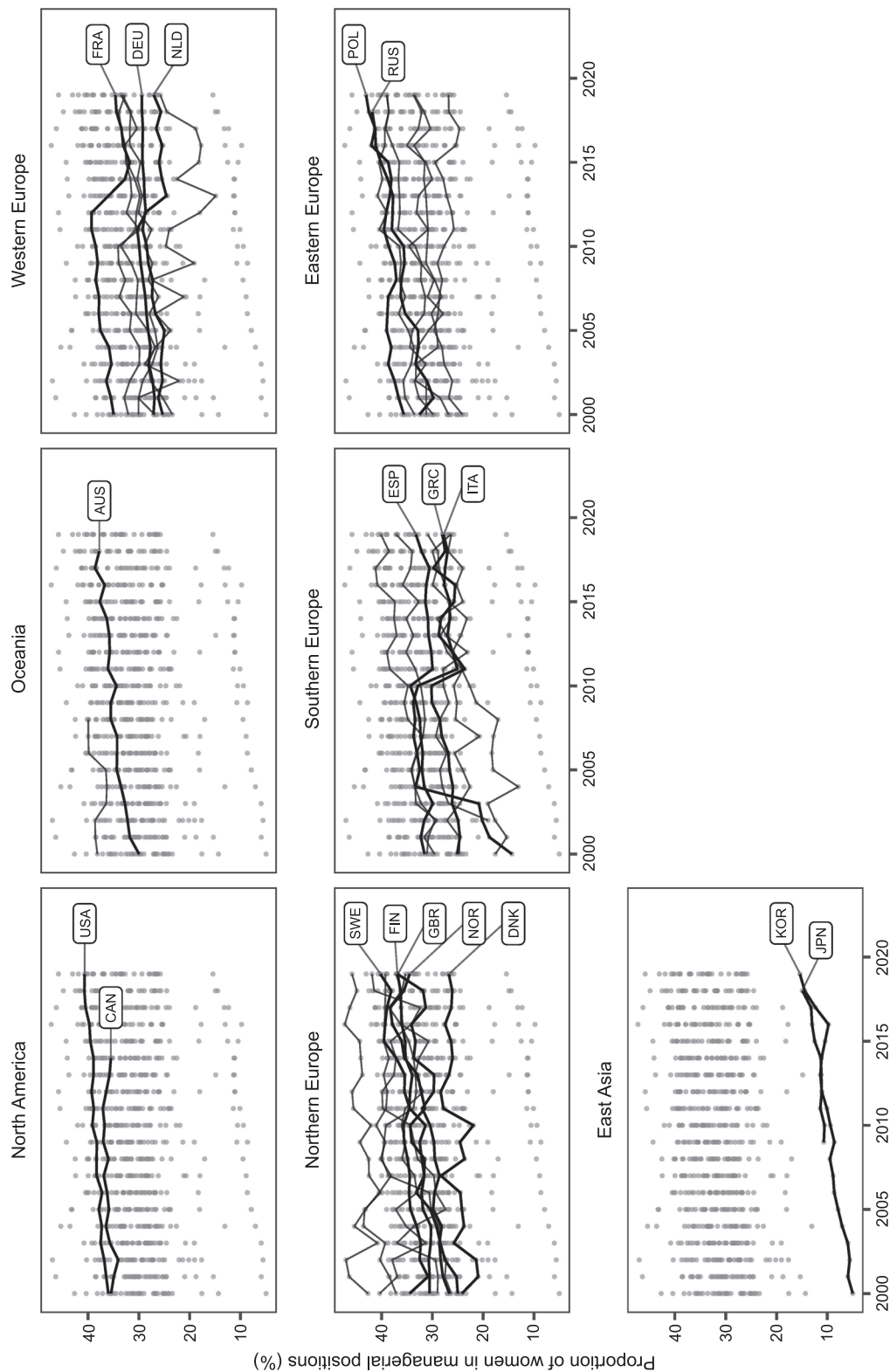
Although each has its own unique institutional regime, the Western European countries such as France (FRA), Germany (DEU), and the Netherlands (NLD) are, as conservative CMEs, broadly characterized by the development of strategic coordination at a smaller scale than a state level (Estévez-Abe, Iversen and Soskice 2001). However, due to the unexpected changes in the trends in these three countries around 2013, which slightly diminish the data's reliability as macro statistics, here we focus exclusively on the trends in Germany, which showed this smallest change.² The proportion of women in managerial positions in Germany increased slightly from 27% in 2000 to 30% in 2011, and declining slightly to 29% in 2012, remained stagnant up until 2019. Comparing Germany with the Nordic countries, which also belong to the CME regimes, there were no significant differences in the early 2000s, but in the subsequent period the trends in Germany diverged, as the rise in the proportion of women in managerial positions remained stagnant. It is reasonable that in the conservative CME countries the disadvantages arising for women due to institutional factors—namely, the emphasis on long-term employment relationships and the accumulation of firm- or industry-specific human capital—have not been eradicated even in recent years.

Kathleen Thelen provides valuable insights in her discussion of the polarization of the trends in the proportion of women in managerial positions in the CME countries (Thelen 2012). Thelen is critical of the dichotomous conceptualization, such as LMEs and CMEs, regarding how the government responds to the employer's practices on personnel management and training. Instead, she advocates the "varieties of liberalization" approach, which highlights the fact that CME regimes have developed differing responses to the pressure of liberalization in the postwar period.

The Nordic countries, where the state plays a key role in the development of strategic coordination, adopt the approach of "flexibilization," which involves promoting liberalization without decreasing the levels of social security and other welfare provision for individuals. For instance, Danish workers change jobs more frequently than Japanese workers because small- and medium-sized enterprises (SMEs) in Denmark hire many workers. Firm-based internal labor markets tend to emerge across large-sized firms, and SMEs usually rely on external labor markets to seek workers with necessary skills. Therefore, policy measures to increase the level of employment protection would not be suited to the greater labor market flexibility in Denmark.

People who become unemployed due to shifts in industrial structure or the firm bankruptcy therefore receive unemployment benefits to protect their livelihoods and are provided by the state with vocational training to support skills development. In adopting such policy measures, Denmark seeks to ensure that labor market flexibility and social security are mutually complementary (Viebrock and Clasen 2009; Estévez-Abe, Iversen and Soskice 2001).

On the other hand, Germany and other continental CME countries adopt the approach of dualization,



Note: Only values for OECD member countries shown. The trends of major countries are highlighted. Country abbreviations are based on the ISO 3166 country codes, and regional divisions are based on UN region codes (<https://github.com/lukes/ISO-3166-Countries-with-Regional-Codes>). Here “managerial positions” refers to those professional roles that fall under Major Group 1 (“Managers”) of the International Standard Classification of Occupations (ISCO-08 or ISCO-88).
 Source: International Labour Organization. “SDG indicator 5.5.2 - Proportion of women in managerial positions (%) Annual.” ILOSTAT database, <https://ilostat.ilo.org/data/>. Retrieved on September 3, 2020.

Figure 1. Trends in the proportion of women in managerial positions in OECD countries (2000 onward)

within the state dividing the relevant fields into typical CME fields (the development of firm-specific skills on the assumption of strong employment protection) and the LME fields (a lack of employment protection, and difficulty accessing skills development by companies). While such dualization may take on various forms, it typically manifests as the strategy of attempting to generate the flexibility in the labor market required for capitalism and market mechanisms by maintaining strong employment protection for regular employees in exchange for considerably increase in non-regular workers which are highly flexible employment arrangements (Thelen 2012). Such an approach can be prominently observed not only in continental CME countries, but also in Japan.

The labor market in Japan has become broadly polarized between regular employment, which is based on strong employment security guaranteed by enterprises, and non-regular employment, with less employment security and limited opportunities for skills development (Sato 2009). This polarization between regular and non-regular employment overlaps with gender inequality, and has manifested itself as prominent gender gaps, such as a markedly high percentage of women in non-regular employment in comparison with men. Once mothers of infants and preschool children leave the regular employment sector to become homemakers or raise their children, they face difficulty returning to the regular employment sector and are incorporated into the non-regular employment sector. While part-time workers and other non-regular employees may find it easy to combine work and family life, these workers scarcely obtain opportunities for skill development by companies, thereby posing obstacles for them in pursuing a professional career and in transitioning into a higher-status position or being promoted to a managerial position (Yamaguchi 2017). Figure 1 also shows that the proportions of women in managerial positions in Japan and South Korea are distinctively low, even in comparison with Nordic countries and continental European countries which have relatively lower proportions of women in managerial positions than liberal countries. Despite a gradual increase in recent years, the proportion of women in managerial positions in Japan was 15% in 2018—not even close to the 29% in Germany. The polarization between CME-style regular employment and LME-style non-regular employment, which Japan has adopted as its strategy to generate flexibility in employment, overlaps with overall gender inequality in labor markets. The female concentration into non-regular employment also generates a lower share of women in managerial positions.

In conventional welfare state theory and varieties of capitalism theory, Southern European countries are often treated as the residual category. While the proportions of women in managerial positions in Greece (GRC) and Spain (ESP) have seen an unexpected change from 2010 to 2011, their overall trends are similar to those of Western European and Northern European countries. For instance, the proportion of women in managerial positions in Greece has risen slightly from 25% in 2000 to 28% in 2019, and this pattern is highly similar to that of Germany. Likewise, while the proportion of women in managerial positions in Spain for the same period rose by only one percentage point, for 2000 the value was 32%, a higher percentage than those of the major CME countries, and in 2019 was also the same level as Germany and other continental CME countries. Moreover, the proportion of women in managerial positions in Italy (ITA) was rather low at 14% in 2000, but had risen to 28%, the same level as Germany, in 2019, and, excluding the changes from 2003 to 2004 and from 2010 to 2011, has been increasing at a comparable pace to those of Northern and Western European countries. These Southern European countries have typically been categorized as the familiaristic welfare regime that expect women to play a prominent role in providing care for other family members (Andersen 1999; 2016). Such circumstances suppress the employment rates of women, and the proportions of women in managerial positions are typically expected to be at low levels as well. However, in recent years the gap between the continental European countries and the Southern European countries is diminishing, and it is necessary to further investigate what kinds of changes are being brought about in employment and family policies and companies' employment practices.³

V. Gender inequality in promotions to managerial positions in Japan

1. Promotions to managerial positions for men: Application of the status attainment model

Based on the previous discussion, we investigate gender inequality in promotions to managerial positions in Japan, using the 2015 SSM Survey. Takenoshita (2018b) applied the status attainment model to explore the heterogeneous nature of the process of promotions to managerial positions for men. The analysis was conducted separately by firm size, because of the large disparity in work conditions between large- and small-sized firms in Japan. In addition, we focus on the role of university education in shaping promotion chances in a greater detail because we see the continued educational expansion in higher education which may increase its heterogeneity in labor market outcomes. To do so, we divide the university graduates into those who graduated from prestigious universities and those from other universities.

Through the statistical analyses, we found that family background and educational attainment played significant roles in shaping the transition into a managerial position in the large firm sector. Those whose father was a professional or a manager were more likely to become a manager in the large-sized firm than those whose father was a farmer.

We see the significant disparity in becoming a manager in large-sized firms between those whose father was a professional or a manager and those whose father was a farmer. Meanwhile, an opportunity in access to managerial positions in SMEs (small and medium-sized enterprises) did not differ by class of origin, after controlling for educational attainment.

Turning to the impact of educational attainment, while in large firms there was a significant disparity among university graduates in terms of the tendency toward promotions to managerial positions between those who graduated from prestigious universities and those who graduated from other universities, such a pattern was not observed in the case of SMEs. Looking also at the connections between careers in the labor market and promotions to managerial positions, while in large-sized enterprises a pattern was observed that vividly reflected internal promotions through education and training within the organization, in the case of SMEs there was no indication that not entering employment with an enterprise directly after graduation or changing employers in mid-career presents a disadvantage in promotions to managerial positions. This indicates that men employed by large-sized enterprises are subject to unequal treatment due to social class of origin and educational attainment in terms of access to stable employment security for which there is an emphasis on the development of firm-specific skills and access to employment opportunities at CME-type large-sized enterprises. In the case of SMEs, the considerable mobility in the labor market is notably observed, given factors such as the lack of disadvantages that changing employers presents with regard to promotions to managerial positions, and the high dependency on external labor markets for procuring human resources. And there is little inequality in promotions to managerial positions that stems from social class of origin or educational attainment.

2. Decomposition of gender gap in the process of promotions: Application of event history analysis combined with DFL decomposition method

Takenoshita (2018a) goes on to explore the gender inequality in the process of promotions to managerial positions. This analysis was conducted by combining event history analysis,⁴ an approach frequently adopted in the analysis of careers, with the Dinardo-Fortin-Lemieux (DFL) decomposition (DiNardo, Fortin and Lemieux 1996; Fortin, Firpo and Lemieux 2011; Lemieux 2006).

(1) Detailed procedures of the statistical analyses

More specifically, these approaches were applied to investigate whether the gender gap in promotions to managerial positions arises as a result of the differences between men and women in the distribution of independent variables (composition effects), or the differences between men and women in the coefficients, that is the effects exerted by the independent variables upon the dependent variables (coefficient effects).

$$\log \frac{p_{it}}{1-p_{it}} = b_0 + \sum_k x_{kit} \quad (1)$$

Equation 1 indicates the discrete-time logit model, one of the most well-known methods in event history analysis. p_{it} denotes the hazard rate in which an event occurs at a given time t across individuals, as denoted by i . To capture whether the gender inequality in managerial positions is attributable to the gender differences in the distribution of independent variables, we conducted the discrete-time logit model separately by gender, and estimated the gender gap in the hazard rates of transition into managerial positions among male and female samples, based on the Equation 2.

$$\delta = P(y = 1 | g = 0) - P(y = 1 | g = 1) \quad (2)$$

This equation contains the two terms: the female average hazard rate and the male average hazard rate. If $\delta > 0$, men have significant advantages in transition into managerial positions. When calculating δ , we used the counterfactual weights in which men and women have the same distribution of independent variables. We can estimate the counterfactual weights by using the logit model for the probability of women relative to men. This logit model includes several independent variables for predicting this outcome. Based on this model, we estimated the probability that an individual i is women, P_i , which is also used to estimate the counterfactual weight as Equation 3.

$$\omega_i = \frac{1 - P_i}{P_i} \quad (3)$$

We calculated the difference in δ s between the model with counterfactual weights used (δ_ω) and that without using these weights (δ_0) in Equation 4. If δ_ω declined substantially relative to δ_0 , we can conclude that gender inequality in transition into managerial positions is attributable to gender inequality in the distribution of independent variables.

$$\gamma = \frac{\delta_0 - \delta_\omega}{\delta_0} \quad (4)$$

Conversely, we also used the method of doubly robust estimator to identify the contribution of the coefficient effects to shaping gender inequality in managerial positions, as shown below (Morgan and Winship 2015).

$$\log \frac{p_{it}}{1-p_{it}} = b_0 + b_1 Z + b_2 X + b_3 ZX \quad (5)$$

In this equation, X represents gender, and Z denotes a given covariate whose effect is assumed to differ between men and women. We estimate these coefficients with the counterfactual weights added to this logit model.

For these statistical analyses, we used the data derived from the 2015 SSM survey. This data has some strength in capturing the trajectories of life courses across individuals. A unit of observations is a spell rather than individuals. We started observing individuals who began working after completion of full-time schooling and explored whether or not they shifted to managerial positions until they reached 64 years of age. The number of individuals used in this study was 5,627, and the number of spells finally became 101,594.

(2) Hypotheses

The analysis addresses the following four hypotheses. Firstly, gender inequality in managerial positions arises due to differences in distribution of educational attainment between men and women (H1). That is, women are at a disadvantage when it comes to promotions to managerial positions due to their lower educational backgrounds in comparison with men. Secondly, gender inequality in managerial positions arises because more women experience non-regular employment or leave the labor market (H2). These two hypotheses are tested, using the DFL decomposition technique as specified above.

Thirdly, the gender inequality in managerial positions is attributable to the differences in the effect of

educational attainment on promotion chances (H3). As Takenoshita (2018b) argued, there are discrepancies in the opportunities for promotions to managerial positions among male university graduates—namely, those who graduated from prestigious universities had greater opportunity to enjoy more favorable conditions for promotions to managerial positions than those who graduated from other universities. In contrast, in the case of women, even those who graduated from prestigious universities may not have a significantly higher likelihood of promotions to managerial positions in comparison with those who graduated from other universities or those with different educational backgrounds. As discussed above, employers do not regard female workers as core workers regardless of their educational background and exclude women from the opportunities to develop firm-specific skills because women tend to quit a job due to their greater family responsibilities.

Finally, gender inequality in promotion chances arises because of the difference between men and women in the effect of firm size on promotions (H4). It is conceivable that male workers in large-sized firms have more opportunities for promotions because large-sized organizations are able to guarantee stable employment and opportunities for skill development, and because they tend to have more managerial posts given the greater scale of their organizations. However, in large-sized firms in Japan, some women, even regular workers, have been hired as clerical workers in a non-career track. This type of job assignment is specific to female workers in Japan. As jobs in a non-career track are assigned more routine tasks not requiring some experience and training, women in this type of track face difficulties accessing the OJT opportunities necessary for promotions to managerial positions (Konno 2000). It is therefore anticipated that large-sized organizations see considerable gender gaps in promotions given their strong tendency to establish different forms of employment for men and women. In contrast, SMEs, due to their small scale, are less likely to differentiate or divide workers into several employment categories, such that a worker may be expected to carry out various tasks. It is therefore difficult for such enterprises to assign routine tasks to female employees. The labor market for SMEs is thus characterized by high mobility, and such enterprises rely to a certain extent on the external labor market to obtain human resources and assign roles, such as hiring workers seeking to change employers from outside of the organization. The gap in likelihood of promotions for women between large-sized and small-sized firms is therefore smaller than its male counterpart.

(3) Results of the statistical analyses

We found the following results when testing the hypotheses specified above. Table 1 presents the results of the composition effects as formulated above. An average hazard rate of male workers to become managers is roughly six times larger than its female counterpart when we did not apply any counterfactual weights to the data set. In Model 1, we used the counterfactual weights so that we could make the distribution of family background almost the same between men and women. The δ in Model 1 shows that there was almost no change in gender disparity in promotion chances. Even after adding educational attainment to Model 1, we saw the negligible difference in δ between Model 2 and Model 1. It means that gender gap in promotions cannot be attributed to the difference in the distribution of educational attainment between men and women.

To test the second hypothesis, we added the labor market positions to the model of the DFL decomposition. The results of Model 3 indicated that less than 10 percent of gender gap in promotions is attributable to the

Table 1. The result estimated by the DFL decomposition method

	Women	Men	δ	$\gamma \times 100$
Samples	0.0022	0.0145	0.0122	
Model 1	0.0022	0.0145	0.0122	-0.09
Model 2	0.0023	0.0145	0.0122	0.48
Model 3	0.0034	0.0145	0.0111	9.38
Model 4	0.0034	0.0145	0.0111	9.10

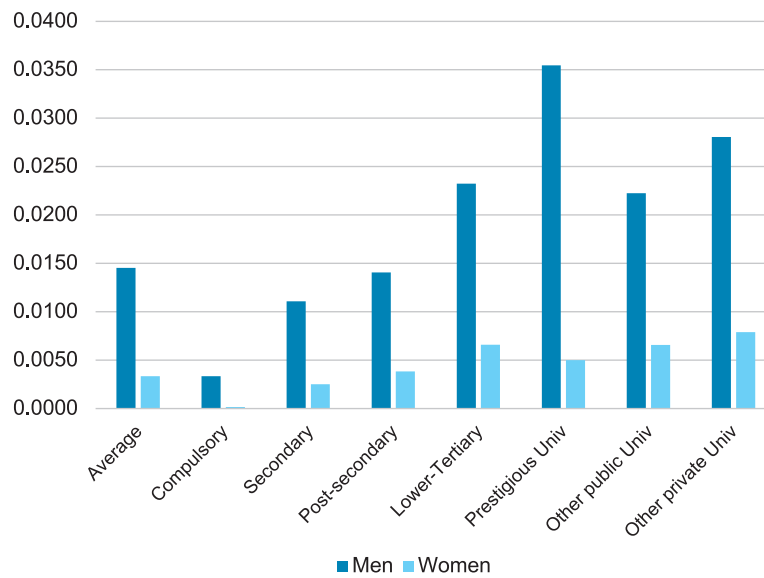


Figure 2. Predicted hazard rates of transition into managerial positions (by gender and educational background)

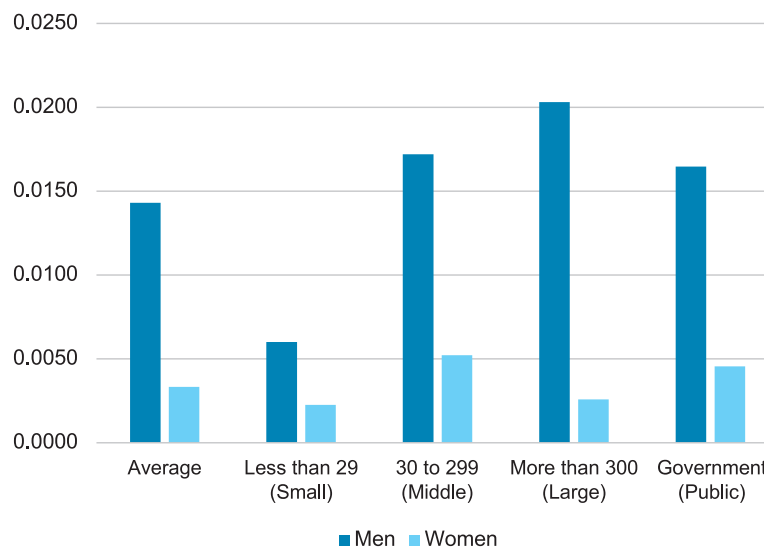


Figure 3. Predicted hazard rates of transition into managerial positions (by gender and firm size)

difference in the distribution of labor market positions. This result seems consistent with the prediction of H2. Finally, when we added family situations to the DFL decomposition model, we did not find any substantial change in gender disparity in promotions.

When comparing the distribution of labor market positions between men and women, 27 percent of cases among women are in non-standard employment, whereas only 6 percent of cases among men are in this employment category. The distribution of experience of unemployment or inactivity in a labor force shows the similar trend. 38 percent of cases among women has experience of unemployment or inactivity over their life course, while only 6 percent of cases among men has this experience. The result suggests that the female concentration into the precarious status in the labor market explains less than 10 percent of gender inequality

in promotions.

Next, we look at the results about the gender disparity in the effects of education and firm size on promotion chances, which were estimated by the doubly robust estimator. We found that the effects of education and firm size on promotion significantly differed between men and women. Figure 2 presents the predicted hazard rate of promotions for men and women by an educational level, based on the results from a discrete-time logit model. This result also applied the counterfactual situation in which women had the same distribution of educational attainment as men did. As for men, the graduates of prestigious universities had significantly greater advantages in promotions than graduates of other universities. But, as for women, we did not find any significant difference in promotions between graduates of secondary schooling and those of prestigious universities. It is also noted that the promotion opportunity among female university graduates was absolutely lower than male graduates of secondary schooling. Hence, female graduates of selective institutions did not have significant advantages in promotions as compared to men with the same educational level.

We also found the similar patterns of the association between firm size and promotions by gender (Figure 3). Male workers in the large firm sector were more likely to become promoted than those in the small firm sector. Meanwhile, there was no significant difference in promotion chances between female workers in the large-sized firms and those in the small-sized firms. In other words, female workers in a large firm did not gain a significant advantage in promotions as male workers did.

The results of female disadvantage in promotions in Japan are overall consistent with our previous discussion in this paper concerning how the formation of gender inequality depends on the institutional settings of labor market. The Japanese labor market has provided its core workers with stable employment and opportunities for developing firm-specific skills. Employment policies implemented by the Japanese government have also played a complementary role in maintaining this skill development system. However, the practice of long-term employment at a certain enterprise and the expectations toward such workers have excluded women who are responsible for housework and raising children from access to the skill development provided by organizations. It has consequently become difficult for women to secure higher-status positions—that is, promotions to managerial positions—within enterprises. This trend is prominent across the female workers in the large-sized firms, in which some female workers are distinctively employed on a non-career track. The results of our analyses support such arguments.

VI. Conclusions

This paper has investigated gender inequality in promotion chances from the institutional perspective, based on the cross-national comparison. We focus specifically on the role of human capital development and welfare state policies. We utilized macro-level statistical data from the ILO to create an overview of the differences across several industrialized countries, including Japan. Finally, we drew on the empirical results to explore the roles of institutions in gender inequality in promotions to managerial positions in Japan, using the individual data set.

This paper also addressed the significant influence of institutional factors in each country on the trends in the proportions of women in managerial positions. Of those institutional aspects, skill development systems, labor market coordination between employers and employees, family policies by welfare states, and the pattern of liberalization in recent years are particularly relevant. However, not all of the international trends in the proportions of women in managerial positions can be explained with the institutional perspectives as formulated in this article. Although we did not address other topics in detail in this paper, several countries that are classified as the same type of institutional regime display their different trends. For instance, Denmark and Sweden, the UK and the US, Germany and France, among others, are classified as belonging to the same typology of the welfare regime, but these countries differ on various other aspects. The changes and trends in the Southern European countries in recent years are also an indication that the conventional arguments are not

sufficiently all-encompassing explanations of gender inequality in promotions to managerial positions. Future research to review the theoretical framework needs to take into account institutional aspects other than those of Western and Northern European or Anglo-Saxon countries.

The majority of cross-national comparative research of gaps, inequality, labor, employment and other such topics to date has generally sought to establish theories by drawing on examples from English-speaking countries such as the US and the UK, continental European countries such as Germany and France, and Nordic countries such as Sweden. In the future, it will be necessary to further explore the different theoretical perspectives, from which we can develop different concepts or insights when we focus on Japan and other Asian countries.

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Notes

1. Refer to the additional online materials for more detailed comparison of the trends in each country. <https://www.jil.go.jp/institute/zassi/backnumber/2020/12/hosoku.html>.
2. In France, the proportion of women in managerial positions rose from 35% in 2000 to 39% in 2012 but experienced a non-incremental decline to 33% in 2014, and was subsequently 35% in 2019. The proportion of women in managerial positions in the Netherlands rose slightly from 25% in 2000 to 29% in 2012, experienced a slight non-incremental decline to 25% in 2013 and was subsequently 27% in 2019.
3. From the perspective of international comparison, it is also necessary to address former socialist Eastern European countries, which are classified as periphery countries, in exploring gender inequality in the labor market in light of institutional theory. See Nölke and Vliegthart (2009) and Lane and Myant (2007) for unique observations on Eastern European countries.
4. In order to capture the career movements across individuals, the units of observation were job spells rather than individuals. I constructed person-year files using complete work histories. On the basis of such data, coefficients were estimated using the discrete-time logit model.

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