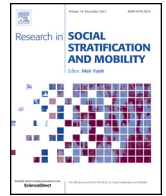




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Revisiting the welfare state paradox: A firm-level analysis from Japan

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ABSTRACT

Many cross-national studies of welfare states and gender inequality report adverse effects of work-family policies on women's labor market outcomes. Countries with generous work-family policies tend to have a lower proportion of women in positions of authority and greater occupational sex segregation than countries without such policies. In order to explain this paradox, scholars have argued that work-family policies may create incentives for employers to exclude women from well-paying jobs. This argument, however, has been left untested due to the absence of firm-level data on promotions. This paper seeks to make both a theoretical and an empirical contribution to this literature. At the theoretical level, we argue that the effect of work-family policies is contingent upon labor market context and organizational practices, which shape employers' incentives or disincentives to implement work-family policies to more fully utilize female workers. Empirically, we use over-time firm-level data to test how government policy interventions in Japan to increase work-family benefits have affected female promotion rates in private companies. Analyzing changes in women's promotion rates across 1000 large companies from 1987 to 2009, we find evidence that employers have tended to promote more, not fewer, women subsequent to policy interventions. Additionally, employers who provided more generous work-family benefits promoted more women. Our findings point to the importance of labor market context in structuring employers' incentives to leverage work-family policy reforms to utilize skilled female labor.

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1. Introduction

Scholars have devoted considerable attention to the impact of work-family policies on women's economic attainment. Despite some evidence for favorable effects of work-family policies on female labor market outcomes (Boeckmann, Misra, & Budig, 2015; Glass & Riley, 1998; Gornick, Meyers, & Ross, 1998; Ruhm, 1998; Waldfogel, 1998), concerns have been raised about the possible unintended adverse effects of policies (Albrecht, Edin, Sundström, & Vroman, 1999; Bergmann, 2008; Estévez-Abe, 2006; Glass, 2004; Mandel, 2012). A provocative and growing literature in this research area suggests the trade-offs created by generous policies (Pettit & Hook, 2009); this has been dubbed the "welfare state paradox" (Mandel & Semyonov, 2006). Women in social democratic countries with highly-developed welfare states have achieved a higher overall level of gender equality in wages and labor market participation (Esping-Andersen, 2009; Hobson, 1990; Orloff, 2009). However, women's representation in managerial positions is lower

in such countries, and the gender wage gap among highly educated employees is larger (Gornick & Jacobs, 1998; Mandel & Semyonov, 2006; Mandel, 2012; Rosenfeld & Kalleberg, 1990). Studies analyzing individual-level data from some countries also provide evidence that women are excluded from better jobs and high wages after utilizing work-family benefits (Briscoe & Kellogg, 2011; Glass, 2004).

In order to explain these outcomes, cross-national studies of welfare states and gender inequality have suggested the importance of understanding the logic of *why* employers respond to work-family policies in the way they do (Mandel & Semyonov, 2006; Shalev, 2008). Work-family policies, it is argued, may incentivize employers to exclude women from positions of authority because when such policies are available, women are likely to take maternity leave and may also seek to convert their position into a part-time arrangement. In other words, the risk of women taking time off or requesting an unconventional work arrangement increases. Therefore, private employers are more likely to statistically discriminate against women as a group due to the risk of work interruptions, particularly in the case of high-skilled female employees (Mandel & Semyonov, 2006; Mandel, 2012; also see Glass & Fodor, 2011; Judiesch & Lyness, 1999). Because occupants of high-skilled jobs are harder to replace, the cost of work interruptions for the firm is greater when they take time off, whereas the work of low-skilled employees is easier to replace or to out-

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source (Estévez-Abe, 2006; Mandel, 2012). Scholars argue that in the presence of work-family policies, employers are more likely to exclude women from high-skilled jobs; low-skilled women in low-paying jobs are thereby advantaged and high-skilled women in higher-paying jobs are disadvantaged (Shalev, 2008).

The welfare state paradox argument rests on the assumption that employers primarily view work-family policies as a cost. But despite the literature's theoretical focus on the employer side, little research addresses the conditions that influence employers' perceptions about the costs and benefits of work-family policies. Insights from the comparative capitalism literature suggest that employers' cost-benefit calculations are shaped by the conceptions of economic rationality they develop in the context of local labor market institutions (Dobbin, 1994; Hall & Soskice 2001; Streeck, 2010). For instance, research has shown that countries with more active external labor markets tend to be more favorable climates for women's labor force participation across the life cycle than countries characterized by an "insider-outsider" labor market, where employers are more likely to engage in statistical discrimination (Adséra, 2004; Boling, 2015; Estévez-Abe, 2006, 2007; Ono & Rebeck, 2003; Yashiro, 2011). Furthermore, employers may modify their reasoning towards female employees when legal pressure increases to provide more work-family policies. But studies of the impact of work-family policies have relied on either individual-level data (Briscoe & Kellogg, 2011; Glass, 2004; Judiesch & Lyness, 1999) or aggregate cross-national data (Charles & Grusky 2004; Mandel & Semyonov 2006; but see Korpi, Ferrarini, & Englund, 2013). Neither type of data is suitable to examine how employers' attitudes toward women may be altered when state-mandated work-family policies change, nor to assess how the labor market context within which employers operate will affect their responses.

In this paper, we begin to address these theoretical and empirical gaps by analyzing how firm-level promotion outcomes change for women following legal reforms that have increased work-family benefits in Japan. Japan provides a distinctive labor market context, with firm-internal labor markets (ILMs) in which employers have typically perceived investment in on-the-job training for women as cost-inefficient (Boling, 2015; Brinton, 1993, 2001; Rosenbluth, 2007). However, a series of government work-family policies over the past two decades have put pressure on Japan's leading companies to increase benefits and incorporate women into the core workforce. In addition, in the context of Japan's developing labor shortage stemming from a consistent decline in birth rates and subsequent small cohort sizes, women's increased stock of human capital is increasingly perceived as too valuable to waste. These developments, together with Japan's distinct labor market structure, make it a rich analytical case to examine the interplay between work-family policies and promotion opportunities for highly skilled women. We suggest the possibility that policies that help reduce women's quit rate may alter Japanese employers' cost-benefit analyses regarding the disutility of hiring and promoting highly-educated Japanese women in firm-internal labor markets.

Using data from over 1000 large Japanese companies from 1987 to 2009, we investigate how the promotion rates of women have changed in the wake of three policy reforms: the 1992 Childcare Leave Act, the 1999 Childcare and Family Care Leave Act, and the 2005 Act on Advancement of Measures to Support Raising the Next Generation. These legal changes have required companies to substantially increase employee leave benefits for childcare and family care. The results of our fixed-effects analysis show that Japanese employers promoted significantly *more* women to managerial positions after policy reforms. Also, more committed employers—those who provided generous leave benefits—were especially likely to promote women. Firms with sex-segregating job assignment practices initially responded negatively by increasing the exclusion of women from managerial positions, but this tendency largely dis-

appeared in later periods. Taken together, our findings argue for the contingency of work-family policies' impact on female workers. We suggest that employers' response to policies varies both by national labor market institutions and by the presence or absence of organizational practices related to gender inequality, such as sex segregation in job assignment.

We begin with a discussion of our theoretical framework regarding how employers respond to work-family policies in the context of national labor market institutions and organizational practices. We then explain three major work-family policy reforms in Japan, and hypothesize the likely response of Japanese employers to the reforms and the likely changes in their response over time. We then discuss findings from a fixed-effects analysis of employers' promotion of women after each policy reform. Finally, we conclude with a discussion of the paper's contributions to the literature on work-family policies, together with our interpretation of the welfare state paradox within the theoretical framework developed in the paper.

2. Institutional differences, organizational practices, and employers' response to work-family policy reforms

Employers interpret the potential impact of external pressures such as state policies through the particular framework of organizational efficiency they have internalized (Oliver 1991). In the case of state-mandated work-family policies, employers are likely to rely on their implicit framework for utilizing female labor, i.e., their logic of female workforce management, as shaped by national labor market institutions and organizational practices related to gender inequality. Hence, employers' perception of the costs and benefits of utilizing and managing female labor after state policy interventions will depend on these national and organizational conditions.

2.1. Female employees in the context of diverse labor market institutions

Scholars of comparative capitalism have shown that theories of organizational efficiency vary across countries and are intertwined with particular national economic cultures and institutions (Aguilera, Filatotchev, Gospel, Jackson 2008; Dobbin, 1994; Fligstein, 2001; Hall & Soskice 2001). Employers in different national skill regimes do not necessarily share the same theories of how best to secure skilled labor. Employers in general skill regimes such as the U.S. and U.K., where there is high interfirm mobility of employees, often perceive it as inefficient to invest in training employees, preferring instead to hire skilled labor from the external labor market (Fligstein, 2001; Thelen, 2004). Employers in industry-specific skill regimes are more likely to provide vocational training to apprentices, perceiving that it is more efficient for them to nurture a pool of skilled labor in the industry from which they can draw (Thelen & Kume, 1999). Many European countries including social democratic ones have developed this type of skill regime. Finally, employers in a firm-specific skill regime view it as most efficient to train and retain their own employees, because they highly value firm-specific skills that cannot be obtained outside the firm (Aoki, 1988; Koike, 1987; Rebeck, 2005). Japan is a quintessential example of a firm-specific skill regime, where large firms have their own internal labor market into which they recruit entry-level career-track employees (Busemeyer, 2009; Ono, 2010).

Given these national differences in labor market structure and skill regimes, it is reasonable to expect that employers' responses to work-family policies may diverge across countries. Firms with ILMs invest in on-the-job training with the expectation that workers will remain with the firm over the long term. In this scenario, the prospect of women's employment interruptions due to childbirth

and childrearing generally leads employers to statistically discriminate against women in hiring decisions for entry-level positions in ILMs (Brinton, 1989, 1993, 2001; Estévez-Abe, 2006, 2007; Iversen & Rosenbluth, 2010). Especially if employers are required to grant childcare leave if the employee requests it, they are likely to continue to prefer male employees. (Given the extremely low rate of childcare leave usage by Japanese men, employers can reasonably assume that new fathers will not request leave).

This statistical discrimination against women in ILMs should largely involve exclusion at the point of hire (Mun, 2010). But once an employer makes the decision to hire a woman into a career-track position in an ILM and to invest in her training, it is in the firm's interest to make it possible for her to remain with the firm, at least up to a certain level of cost.¹ State work-family policies may facilitate this, by helping firms pay for childcare benefits while women take a leave before returning to the job. Whether and how policies may differentially affect hiring and promotion has been little discussed in the literature. This may be because previous studies have analyzed data from countries with external labor markets, where hiring and promotion are not as tightly linked because employers may hire managers from outside the firm as well as promoting them from within. In contrast, we argue that the impact of policy on women's promotion within ILMs is likely to be significantly positive because once women have been hired in entry-level jobs in ILMs, we can expect that employers would have a strong motivation to retain them and make good on the company's investment in training these employees.

2.2. Organizational practices related to gender inequality

Organizations' internal structures and practices also shape employers' responses to work-family policies by defining the worth of female labor. Organizations embody particular ideas of whether and to what extent women can be incorporated into the workplace; in other words, organizations exhibit different levels of gender inequality depending on their internal practices (Acker, 2006; Avent-Holt & Tomaskovic-Devey, 2012; Salzinger, 2003). Sex-segregating job assignment practices are an important way that some organizations contribute to gender inequality, by excluding women from core jobs. In sex-segregated workplaces, women are assigned to peripheral tasks without opportunities to experience a mix of positions that will give them better career opportunities (Kalev, 2009). Also, such workplaces nurture a culture of masculinity that often blocks women's voices (Ely & Meyerson, 2010). Managers in such organizations are likely to see work-family policies as conflicting with their logic, and thus resist policy interventions. Even so, fluctuations in labor supply and demand, together with political pressures to provide employment opportunities to women, may make it difficult for employers to continue to exclude women. The choice to exclude half of the potential labor supply becomes less viable when employers encounter serious labor shortages. The cost of exclusion further increases when legal and political actions to protect and enlarge women's employment opportunities emerge and intensify (Stainback & Tomaskovic-Devey, 2012). These changes may lead employers to reformulate their logic of female labor utilization.

While firms with sex-segregating job assignment practices are likely to be inhospitable contexts for work-family policy interventions, other organizational features may foster employer adoption and compliance with reforms. For instance, employers tend to com-

ply more substantively with legal pressures when the firm has well-established accountability structures, self-regulatory practices, and a past record of compliance with the law (Kalev, Dobbin, & Kelly, 2006; Short & Toffel, 2010). Women's representation in management in the U.S. substantively increased in organizations with accountability structures such as diversity committees and staff who take responsibility for implementing relevant policies (Kalev et al., 2006). Similarly, women's childcare leave usage has been shown to increase in Japanese companies when the voice of human resource departments that implemented the policy is represented on the corporate planning board (Mun & Brinton, 2015).

In summary, we expect that employers will formulate their responses to work-family policies based on labor market structure and the organizational context for gender inequality. Their responses should also logically be expected to change over time as conditions external to the firm change and evolve. We now turn to a discussion of the three major work-family reforms in Japan, and then propose hypotheses regarding Japanese employers' response to these reforms.

3. Childcare leave in Japan

Over the past two decades Japan has developed a series of work-family policies that require employers to provide longer leaves and more flexible work arrangements. Declining fertility rates have been witnessed in most developed countries over the past several decades, but Japan has shown a sustained, extremely low fertility rate that fell to under 1.3 children per woman in the 2000s. It has thus been classified as a "lowest-low" fertility country (Billari & Kohler, 2004; Boling, 2015). The resulting shrinkage in the size of younger cohorts and the subsequent decline in the worker-retiree ratio threaten to disrupt the social insurance system, and have become major government concerns. In order to boost the fertility rate, the Japanese government has actively researched policy solutions and has adopted a series of work-family policies, many of which are similar to those implemented in social democratic welfare states that have exhibited moderate fertility rates around 1.7 children per woman, closer to the population replacement rate (Hoem, 1990, 1993; McDonald, 2006; Oláh & Bernhardt, 2008; Rønsen, 2004). Well-paid parental leave policies and public childcare facilities in particular have been widely cited as important public policies to encourage working women to have more babies (Blau & Robins, 1989; Pettit & Hook 2009).

The work-family policies adopted by the Japanese government have primarily focused on increasing leave benefits, not only by increasing government subsidies but also by putting pressure on employers. The Labor Standards Act of 1947 specified women's right to request up to fourteen weeks of childbirth (maternity) leave from their employer (typically taken as six weeks before childbirth and eight weeks afterward), with a guarantee of 60 percent of pay during the leave. Employers rarely provided childcare leave until the Childcare Leave Act went into effect in 1992; this Act was later amended in the late 1990s and mid-2000s in order to encourage employers to provide greater leave benefits.²

As the first policy intervention, the 1992 Childcare Leave Act mandated that companies strive to provide both men and women the option to take at least one year of childrearing leave per child. As depicted in Fig. 1, the length of childcare leave provided by firms increased sharply after 1992. In addition, companies were mandated to provide 60 percent of pay during the leave. Employers use

¹ In Japanese work-family reforms, maternity and childcare leave benefits are principally paid out of an employment insurance scheme rather than out of the firm's own operating budget, which further incentivizes employers to incorporate women. The details of the policy reforms are discussed in the following section.

² Other policies such as the Angel Plan of 1994 and the New Angel plan of 1999 focused primarily on expansion of the public daycare system and the provision of child bonuses (*kodomo teate*). We thus consider the three legal changes in 1992, 1999, and 2005 as the major policy interventions focused at the employer level.

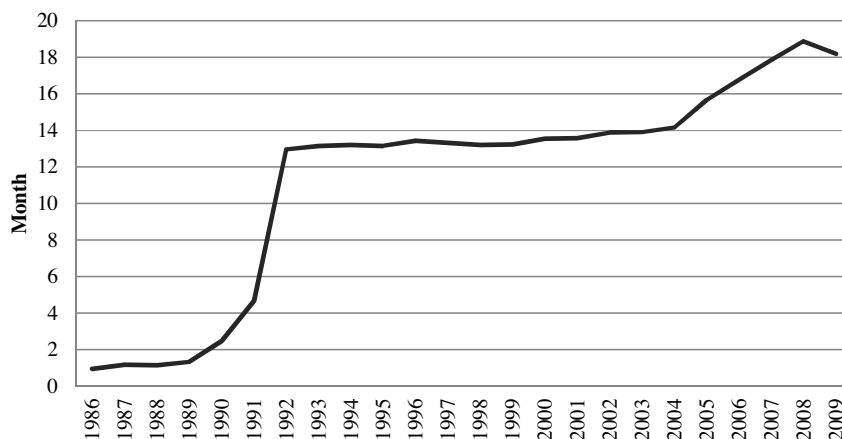


Fig. 1. Length of Childcare Leave Provided by Employers.

Source: Japanese Company Handbook for Job Searchers (Shūshoku Shikihō, Tōyōkeizai Shinpōsha).

money from the government-run employment insurance system in order to pay leave-takers, but their financial role is not unsubstantial because they have to contribute money to the insurance system for all employees they hire. Concerned that leave-takers might not return to work, Japanese employers often paid only 40 percent of pay during the leave, promising that the rest would be paid six months after the employee came back to work. By doing so, Japanese employers tried to reduce their risk of losing trained employees.

In subsequent reforms, the Japanese government has continued to promote policies to help women fulfill their childcare responsibilities while remaining employed. The second policy intervention in 1999 further extended leave benefits, mandating that employers grant employees the right to be away from the work establishment until their child reaches the age of one year and that employers pay half of employees' wages as a childcare leave benefit without delay (i.e. without waiting until the employee returns to work). Additionally, employers were instructed to guarantee the option of reduced working hours and exemption from overtime work for employees with a child under three years of age, as well as guaranteeing employees the right to take leave in order to care for a sick child (Kawaguchi, 2013).

Finally, the 2005 law required employers to take a more proactive role in helping employees achieve compatibility between work and family, as the previous two legal changes were not successful in raising the fertility rate (Schoppa, 2006). Part of the reason for this shift in the government's approach was that the majority of employers had met only the minimum requirements set by the previous laws mandating employers' provision of leave benefits (as shown in Fig. 1), suggesting that those laws were not necessarily seriously embraced by employers. The new government approach was to incentivize employers to become family-friendly, accrediting companies that developed action plans by providing a designation called a *kurumin mark*; this mark is given to companies where at least one male employee took childcare leave, 70% or more women with children took childcare leave, and during the planning period for the companies' action plan employees were allowed to use extended childcare leave and flexible work arrangements until their children started elementary school (Takeishi, 2007). Although the 2005 reform was not accompanied by legal sanctions, the requirements for receiving a *kurumin mark* significantly increased the amount of benefits to be provided by employers who wanted to establish a good reputation based on receiving the *kurumin mark*.

These developments in Japanese work-family policies put pressure on employers to provide more generous leave benefits and flexible work arrangements. Since women were the primary users

of these benefits, the policy changes are an excellent example of state-initiated reforms that could possibly create disincentives for employers to utilize female labor, according to the framework of the welfare state paradox. But interestingly, Japanese employers seem to have become active in embracing the reforms. As shown in Fig. 1, they voluntarily increased leave benefits after the third reform despite not being mandated to do so. By 2007 about 60 percent of companies had put in place a childcare leave system (Atsumi, 2007), and the figure is close to 100 percent for Japan's largest firms (those employing more than 1000 workers; Takeishi, 2007). By March 2007, the Ministry of Health, Labour, and Welfare in Japan had awarded *kurumin marks* to 2138 companies.³

The few studies examining work-family policy effects in Japan have not found a conclusive relationship between work-family policies and women's employment outcomes. Studies variously report no significant relationship, a negative association, or a positive association. Recent studies have tended to highlight concern about the possible adverse impact of policy implementation (Kodama, 2007; Wakisaka, 2013). This signals the clear need for further studies that examine the association between policy changes and women's employment opportunities. Despite the fact that policies are implemented at the firm level, previous studies suffer from the lack of a theoretical framework to predict employers' responses to policy reforms. Moreover, few studies use firm-level data to examine how employers maintain or modify their behavior after policy changes. In the following, based on our theoretical discussion of employers' logic of female workforce management, we propose hypotheses about how employers respond to state-level policy reforms and how their responses change over time.

4. Japanese employers' response to work-family policy reforms

Contrary to the predictions of the welfare state paradox, Japanese employers might not discriminate more strongly against women after work-family policy reforms, as the labor market context is significantly different from the European labor markets on which scholars have based their argument for the proposed paradox. Rather, policies may be perceived by Japanese employers as an opportunity to *more effectively utilize* skilled female labor by being able to support their inclusion and promotion within ILMs. Given that Japanese employers began to be aware of the importance of

³ http://www.mhlw.go.jp/stf/seisakunitsuite/bunya/kodomo/shokuba_kosodate/kurumin/.

retaining skilled female labor in the 1990s (which overlaps with the observation period of this study), we expect to find that they were likely to promote more, not fewer, women after policy reforms. In related work (Brinton & Mun, in press), we analyzed interviews with human resource managers in 25 large Japanese companies and found that interviewees universally mentioned the inevitability of utilizing more female labor and the utility of work-family policies in facilitating this. For example, an HR manager at a large IT company said, “The cost of work-family policies is pretty high. But hiring a new employee is even more costly. We want [female] employees who understand the company to continue working here. If we grant parental leave, it is more likely that will be the outcome” (Brinton & Mun, in press). This leads to the following prediction:

H1. Employers may promote more women into managerial positions after work-family policy reforms have been instituted.

As argued above, Japanese employers’ response to policy changes is also likely to depend on their job assignment practices related to gender inequality, specifically their use of sex-segregating practices. Many large Japanese firms have instituted employment practices that exclude women from positions with training and promotional opportunities. The most widely-adopted of these practices has been the two-track management system (*kōsubetsu kanri seidō*) comprised of a career or promotional track (*sōgōshoku*) and a peripheral track (*ippanshoku*, or general clerical; Mun, 2016; Ogasawara, 1998; Shire, 2000; Shuto, 2009; Tachibanaki, 2010). This management system systematically disadvantages women by allocating them predominantly to a peripheral track with no promotional opportunities. Because employers who use the two-track system prioritize men while treating women as a secondary workforce, they may not move women into core jobs even after policy changes. This logic of exclusion, however, became less viable due to the de-legitimization of the two-track system after the revision of Japan’s Equal Employment Opportunity Law in the late 1990s. Also, voices arguing for the need to retain women in the skilled labor force have been increasing since the late 1990s (Matsui, Suzuki, Tatebe, & Akiba, 2014; Ono & Rebick, 2003; Yashiro, 2011), when women increasingly entered higher education and Japan’s impending labor shortage also began to attract greater attention. We expect that employers with the sex-segregating two-track system were less likely to respond to legal changes by including more women in managerial positions in the early period of policy reform, when there was still relatively little discussion in Japan about the importance of retaining female labor. We expect this negative response to have later disappeared. We thus hypothesize:

H2. Firms with sex-segregating job assignment practices are less likely to have promoted more women after work-family policy reforms, but such a tendency will have disappeared in the later period of reform.

As Fig. 1 depicts, some employers provide higher work-family benefits than mandated by law, reflecting their commitment to retain women by going beyond the bare minimum required. In our interview-based study (Brinton & Mun, in press), we show that it has recently become popular among large Japanese companies to increase work-family benefits; many HR managers in our interviews bragged about the generosity of benefits their companies provide, saying that they do not want people to think that “this company provides only the legally-mandated level of benefits”. They view the provision of generous policies as a way to signal their commitment to creating a women-friendly workplace. We thus predict that employers who increase benefits will be more likely to promote women, and this tendency may accelerate after state policy reforms. Among many work-family benefits, we focus on the length of childcare leave, an important focus of the Japanese state’s

work-family policies. We predict that the relationship between benefits and the promotion of more women into managerial positions will be pronounced after the late 1990s, as the importance of retaining women in firm-ILMs was beginning to be emphasized at that time. Another reason for this prediction is that unlike earlier reforms, the 2005 policy reform incentivized employers’ voluntary compliance by giving the *kurumin mark*, further encouraging employers who had shown a commitment to increase women’s workplace opportunities.

H3. An increase in the amount of work-family benefits (i.e., length of childcare leave) provided by companies will be positively related to an increase in women’s promotion to managerial positions after work-family policy reforms, particularly in the later period.

To test these predictions, we use a company-panel data set that includes information on women in managerial positions and information on companies’ job assignment practices across the two-decade period spanning work-family reforms.

5. Data and methods

Data are drawn from two sources, one of which provides information about workforce composition and human resource policies in major Japanese companies, and the other of which provides financial information on firms. The data on workforce composition are from the *Japan Company Handbook for Job Searchers* (*Shūshoku Shikihō*), collected annually by a prominent Japanese publisher of company data. The publisher, *Tōyōkeizai Shinpōsha*, started the survey in 1984 when it sampled 1005 of the country’s largest companies, including both listed (i.e. publicly traded) and unlisted companies, based on the number of employees hired in the previous year. These companies were large and well-known companies across industries that included mass communications, IT, trading, finance, manufacturing, construction, utilities, retail, and services. Since a majority of these companies have been continuously selected over the years, the *Handbook* allows us to construct company-panel data.⁴ Each year’s edition of the *Handbook* includes information on workforce composition by gender and job type as well as the company’s human resource practices including the two-track management system; we use data starting in 1986 because information regarding the two-track system was not collected before then. (Our analysis begins in 1987 because all time-varying variables including the two-track system are lagged). We complement the *Handbook* data by adding financial information about the sampled companies. We use Nikkei NEEDS data that compile information from the annual financial reports of all publicly traded companies in Japan; 64% of companies included in the *Handbook* are matched. As a result, only publicly traded companies (or observations during the years when companies were publicly traded) are included in the sample.

5.1. Variables

5.1.1. Dependent variable

We use the proportion of female employees in management positions as the dependent variable. While it would be preferable to calculate the proportion female among all managers, the

⁴ The data are unbalanced because the publisher added new companies to the sample if large companies were newly founded or if companies that had not been large enough to be previously included experienced significant growth; the publisher also dropped companies if they disappeared or shrank significantly. Given that firm size and reputation did not change quickly, however, most of the companies in the *Handbook* are continuously observed, allowing us to construct panel data for prominent companies that did not disappear (through mergers or bankruptcy) during the observation period.

Handbook data do not provide information on the total number of managers for the years 1987–1998. As an alternative, we calculate the proportion of female managers among female white-collar employees. Because mid-career hiring remains very limited in large Japanese firms, an increase in the proportion of female managers is likely to almost exclusively reflect women's promotion to managerial positions from within the firm (Hirano 2013; Itoh 1994). We do not consider the rank of female managers because it is extremely uncommon for women to be in the higher ranks of management in Japan (Nakakubo, 2009; Wakisaka, 1997). We use a log-transformation for the dependent variable in order to have a distribution closer to a normal distribution.⁵

Fig. 2 shows the average proportion of managers among female white-collar employees in a firm since 1987. The average proportion shows a steady upward trend, from 0.05 in 1987 to 0.10 in 2009. We note that the 2009 figure is highly consistent with occupational statistics collected and reported by the government.

5.1.2. Independent variables

In order to test how employers responded to the three policy interventions, we create three period dummy variables to make comparisons before and after each legal change. In the first set of analyses we create a period dummy from 1992 to 1998 to examine the impact of the 1992 law on the proportion of female managers. Similarly, we include a dummy variable for the years from 1999 to 2004 in the second set of analyses to examine the impact of the 1999 law. Finally, in the last set of analyses, the 2005–2009 period dummy is included to examine the impact of the 2005 law.

Second, in order to examine the impact of organizational sex-segregating job practices on employers' response to state policy interventions, we include the presence of the sex-segregating two-track system in a company as an independent variable. In the *Handbook* data, companies indicate whether or not they hire new applicants into a two-track system, and if so, they report the names of the tracks they use. If the tracks are identified as managerial and clerical tracks (i.e. *sōgōshoku* and *ippanshoku* in most cases), we categorize the company as having a two-track management system. The variable is binary, coded 1 if a company uses the two-track hiring practice in the year of observation and coded 0 if otherwise.

Third, from the *Handbook* data, we collect information about the amount of childcare leave that firms provide by measuring the number of months of childcare leave that employees are allowed to take. Japanese companies rarely provided childcare leave when the childcare leave policy was not supported by any regulation, i.e. before the Childcare Leave Act was enforced in 1992. But after the 1992 law mandated firms' provision of one year of leave, many companies began to offer generous policies that covered more than one year of leave per child. This variable is log-transformed because of its highly skewed distribution; that is, a few employers offered very long leave policies.

5.1.3. Control variables

We include as control variables other organizational conditions that may affect the promotion of women. The number of white-collar employees is used as a proxy for firm size. Firm age is also included. As a measure of firm performance, we include return on assets (ROA), calculated as the ratio of net profits to total assets. We also include labor cost per employee as a measure of firms' investment in employees. In order to control for industry characteristics, we include industry feminization, measured as the proportion of employees who are female among white-collar employees in the

Table 1
Descriptive Statistics.

	1992 Law Analysis (1987–1998) N = 4394				1999 Law Analysis (1993–2004) N = 5092				2005 Law Analysis (2000–2009) N = 4586			
	Mean	Std. Dev.	Min	Max	Mean	Std. Dev.	Min	Max	Mean	Std. Dev.	Min	Max
Proportion of female managers among female white-collar employees	0.046	0.075	0	0.811	0.060	0.092	0	0.936	0.077	0.109	0	0.936
Childcare leave (in months)	8.692	7.934	0	36	13.054	6.118	0	60	15.530	7.012	0	72
Two-track system	0.367	0.482	0	1	0.383	0.486	0	1	0.349	0.477	0	1
Number of white-collar employees	4550.253	9184.945	131	303951	3981.590	7063.237	112	112940	2990.018	5197.947	30	112940
Firm age	50.967	19.900	2	129	52.992	21.153	1	135	55.153	23.133	1	140
ROA	1.975	2.443	-32.186	24.765	1.622	3.686	-64.778	56.573	2.267	4.835	-64.778	56.573
Labor cost per employee	4.548	2.871	0.050	18.911	5.205	5.318	0.038	300.577	6.261	19.958	0.038	824.533
Industry feminization	0.244	0.087	0.106	0.432	0.223	0.078	0.106	0.430	0.200	0.064	0.104	0.391

⁵ When the number is zero, we change it to 0.1 since zero cannot be log-transformed.

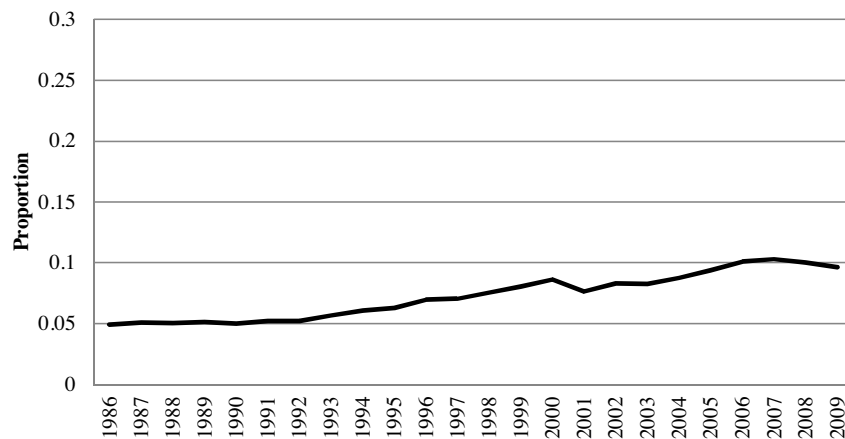


Fig. 2. Average Proportion of Managers among Female Employees, by Firm.

Source: Calculated from Japanese Company Handbook for Job Searchers (Shūshoku Shikihō, Tōyōkeizai Shinpōsha).

focal firm's industry.⁶ All independent and control variables are lagged by one year so as to avoid the situation where a change in the dependent variable and changes in time-varying covariates occur simultaneously (Box-Steffensmeier & Jones, 2004).

5.2. Statistical models

We conduct three sets of analyses, each corresponding to the period covered by a legal change. In order to examine the impact of the 1992 law, the first set of analyses covers the period 1987–1998, which includes several years before and after the law and thus creates a bracket around the legal change. Similarly, the second set of analyses spans the period 1993–2004 so as to examine the impact of the 1999 law, and the third set of analyses covers the 2005 law by spanning the period 2000–2009.

We analyze firm-level panel data on promotions to managerial positions using firm and year fixed-effects regression. By examining only within-firm variation, firm fixed-effects regression accounts for unmeasured intrinsic firm-specific characteristics that might affect outcomes (Gelman & Hill, 2007). Also, the inclusion of year dummies in the models prevents the possibility that period dummies (i.e., policy changes) are picking up secular upward trends in female promotion, and further controls for macro-level economic trends other than government policy changes. The firm and year fixed-effects analysis thus provides a very conservative and stringent test for the effect of policy interventions. Fixed-effects regression cannot analyze companies that appear only once (due to the lack of within-firm variation). This is often discussed as a downside of fixed-effects models; fortunately, our sample includes very few cases that appear only once.

6. Results

Table 1 shows descriptive statistics for the firm-year observations included in each analysis period. The statistics reflect the changing characteristics of Japanese companies across the past two decades. The mean length of childcare leave provided by firms increased substantially, from slightly less than 9 months in

the first period to 15.5 months in the third period. Firm performance (ROA) fluctuated but was the lowest during the second period, when the Japanese economy was in a deep recession. Despite changing economic conditions, the average labor cost per employee increased steadily, implying that expensive labor was not completely replaced with cheap labor. This is a tendency widely reported in Japan, where middle-aged men who were in secure positions (i.e. in ILMs) prior to the economic downturn have generally maintained their positions while members of the young generation, especially the less-educated, have experienced increasing difficulties in finding jobs and are increasingly shunted into precarious jobs with short-term contracts (Brinton, 2011; Genda, 2003; Osawa, Jung Kim, & Kingston, 2013).

On average, the proportion of female managers increased after each legal reform and this increase was more pronounced in firms without the two-track system. Fig. 3 shows a clear divergent trend between firms with and without the practice; in those without it, the proportion of female managers increased from 3 to 6 percent after the first reform, to 8 percent after the second, and to 10 percent after the third. While firms with the two-track job assignment practice also experienced an increase in female managers, the amount was smaller—from 3 to 4 percent after the first reform, to 5 percent after the second, and to 6 percent after the third. These statistics provide some support for our hypotheses predicting an increase in women's promotion to managerial positions after state work-family policy reforms, particularly in firms without the internal practice of sex segregation.

Models 1, 3, and 5 of Table 2 test the impacts of the 1992, 1999 and 2005 reforms and Models 2, 4, and 6 examine the interaction effects between each policy reform and the two-track system. The results of these models generally support our hypotheses. The coefficients for all three period dummies are positive and significant: women's promotion rate to managerial jobs increased significantly after each policy reform. This supports Hypothesis 1 predicting that Japanese employers would promote *more* women after policy reform. Specifically, the coefficients in Models 1, 3, and 5 show that the average proportion of female managers in a firm increased by 170 percent ($=[\exp(0.990)-1] \times 100$) over the period 1992–1998 when compared to the pre-reform period, by 80 percent ($=[\exp(0.591)-1] \times 100$) over the period 1999–2004 when compared to the period 1992–1998, and by 20 percent ($=[\exp(0.182)-1] \times 100$) over the period 2005–2009 when compared to the period 2000–2004. Although the initial proportion of female managers was very low, these effect sizes are large enough to show substantive improvements. For instance, a firm with 3.3 percent of female managers—an average statistic among firms dur-

⁶ We constructed 18 industry categories based on the Japan Standard Industrial Classification (Statistics Bureau of Japan, <http://www.stat.go.jp/english/index/seido/sangyo/index.htm>). The categories include finance, publishing, telecommunication, wholesale and trading, retail, service, electronics, automobile and related product, machinery, food, pharmaceuticals and cosmetics, chemical, clothing and textile, iron/steel/non-ferrous, other material manufacture, construction and real estate, energy, and transportation.

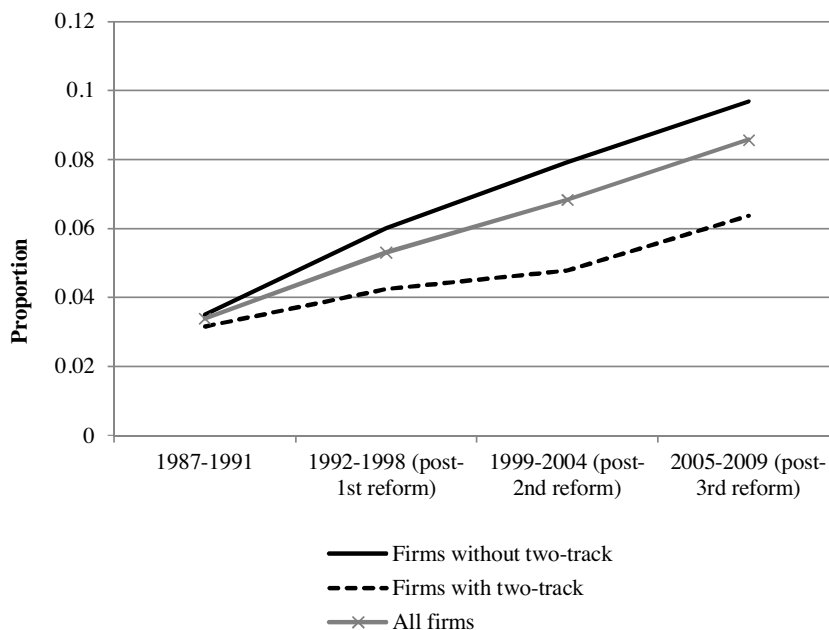


Fig. 3. Average Proportion of Managers among Female Employees: Firms With and Without the Two-Track System.

Table 2

Fixed-Effects Analysis of the Impact of Policy Interventions on White-Collar Female Employees' Promotion.

	1987–1998		1993–2004		2000–2009	
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Period 1992–1998	0.990*** (0.129)	1.051*** (0.130)				
Period 1992–1998 [†] Two-track system		–0.144** (0.051)				
Period 1999–2004			0.591*** (0.125)	0.629*** (0.128)		
Period 1999–2004 [†] Two-track system				–0.084 (0.058)		
Period 2005–2009					0.182** (0.070)	0.157* (0.073)
Period 2005–2009 [†] Two-track system						0.060 (0.052)
Two-track system (=1)	–0.015 (0.045)	0.075 (0.055)	–0.037 (0.044)	0.008 (0.054)	0.011 (0.041)	–0.013 (0.046)
Log childcare leave (in months)	0.012 (0.010)	0.014 (0.010)	–0.019 (0.018)	–0.019 (0.018)	0.120* (0.056)	0.120* (0.056)
Log number of white-collar employees	–0.394*** (0.073)	–0.391*** (0.073)	–0.510*** (0.071)	–0.512*** (0.071)	–0.409*** (0.052)	–0.409*** (0.052)
Log firm age	0.344 (0.397)	0.275 (0.398)	–0.268 (0.482)	–0.296 (0.482)	–0.064 (0.334)	–0.042 (0.335)
ROA	–0.006 (0.006)	–0.005 (0.006)	–0.003 (0.004)	–0.003 (0.004)	–0.002 (0.003)	–0.002 (0.003)
Labor cost per employee	–0.038* (0.017)	–0.037* (0.017)	–0.003 (0.003)	–0.003 (0.003)	–0.001* (0.001)	–0.001* (0.001)
Industry feminization	–1.569* (0.784)	–1.396 (0.786)	–0.709 (0.768)	–0.645 (0.769)	–2.555* (1.000)	–2.546* (1.000)
Constant	–2.339 (1.487)	–2.167 (1.487)	0.878 (1.749)	0.971 (1.750)	–0.041 (1.233)	–0.120 (1.235)
Firm and year fixed-effects	Included	Included	Included	Included	Included	Included
Number of firm-year observations	4394	4394	5092	5092	4586	4586
Number of firms	751	751	939	939	933	933
Log-likelihood	–3792.252	–3787.346	–5372.986	–5371.691	–4220.076	–4219.234

* $p < 0.05$.

** $p < 0.01$.

*** $p < 0.001$.

ing the period—increased its proportion of female managers among female white-collar employees to almost 9 percent after the first reform.

Employers using the two-track segregating system, however, do not show promotion rates for women into management to the extent shown by firms without the system (Model 2). This was

particularly the case after the first policy reform. This tendency disappeared after the late 1990s, as predicted by Hypothesis 2: the interaction term between time period and the two-track system is statistically insignificant in Models 4 and 6. This change in interaction effects between policy reform and the sex-segregating two-track system over time is consistent with the hypothesis that

employers changed their behavior when the logic of excluding women from core jobs became less viable under changed economic, social, and political circumstances.

Hypothesis 3 predicted that Japanese employers with childcare benefits beyond the legal mandate would be the most responsive to the 2005 policy reform that incentivized voluntary compliance, but we did not find an interaction effect on female managerial promotion between policy reform and firm-level childcare leave benefits (not reported in the table). Instead, we found a main effect for the organizational commitment to higher childcare benefits. The positive coefficient of childcare leave benefits in Model 5 implies that employers promote more women into managerial jobs when they are providing such benefits. As we expected, these positive associations are significant only in the final period when concerns about a labor shortage increased in Japan.

Several control variables have significant negative effects on the promotion of women. The consistent negative effect of firm size, measured by the number of white-collar employees, was not expected and there is no obvious reason for a negative association. Labor cost per employee is negatively related to women's promotion rates. Because the average labor cost per employee reflects the relative size of the firm's "core" labor force (principally middle-aged male employees in firm-ILMs), this negative coefficient is consistent with the greater exclusion of women from promotional possibilities in firms that already have a large number of men in middle management. This merits further investigation in future work, as it is highly consistent with common conceptions of women's expanding but still limited promotional possibilities in large Japanese firms, partly because the tenure of Japanese middle-aged male employees has increased over the past 20 years at the expense of younger employees' prospects (Genda, 2003). Finally, women's promotion rates are lower in firms that are more feminized. This may seem counterintuitive, but the dependent variable is the proportion of female managers among female white-collar employees, and it is likely that highly feminized industries have a large number of female clerical and sales workers who are not in the running for management jobs.

In sum, contrary to predictions based on previous studies, our findings suggest that employers are not necessarily more likely to exclude women from managerial positions when work-family benefits are substantial. Rather, our firm-level analyses show that in the Japanese case, employers have promoted *more* women into such jobs in the wake of work-family policy interventions. Most striking is the finding that even in firms with a strong practice of excluding women from core jobs (as evidenced by their sex-segregating practice), Japanese women's promotion to managerial jobs increased when external economic and political conditions changed. Women's representation in managerial positions also rose in companies that increased the level of work-family policy benefits. Although our results are based only on publicly-traded companies, it is likely that unlisted companies (companies that did not provide financial reports and were therefore dropped from the sample) have responded in a similar way. A comparison of the publicly traded firms in our sample and the unlisted firms that were dropped shows that the latter are somewhat smaller, younger, and slightly more gender-integrative (i.e., have slightly more female managers). Given that the firms in our sample are more traditional and gender-unequal, we expect that companies dropped from the sample would show even stronger results, i.e., will have promoted even more women after policy interventions.

7. Conclusion

A number of scholars have posited that work-family policies provided by welfare states facilitate women's labor force participation but not necessarily their occupational and economic

achievement (Mandel & Semyonov, 2006; also see Hegewisch & Gornick, 2011). Scholars suggest that this welfare state paradox may result from an exacerbation of employers' tendency to statistically discriminate against women when state benefits support women's parental leave, reduced work hours, and other work behaviors that might lower their productivity.

This paper joins an emerging trend of using organizational-level data to study inequality (see Avent-Holt & Tomaskovic-Devey, 2014). Our firm-level analysis allows us to see how women's representation in managerial work changes after firms adapt to policy reforms mandating parental leave and encouraging organizational compliance. We locate firms' response in the context of a labor market structure characterized by strong ILMs based on firm-specific skills. Although Japanese firms have traditionally excluded women from core jobs in ILMs (Brinton, 1993, 2001; Mun, 2010; Ono, 2010), our analyses show that more, not fewer, women have been promoted into managerial jobs since the government pressured employers to provide more work-family benefits. Moreover, many employers have voluntarily increased their provision of leave benefits beyond the legal requirement, and this suggests that they have found these two strategies to be complementary. Overall, the prediction of previous cross-national studies that employers are less likely to promote women when the state passes policy reforms to increase work-family benefits is not empirically supported by our findings.

Our analysis of the Japanese case suggests that studies examining the impact of work-family policies on female promotional possibilities must pay attention to national labor market institutions and also to organizational practices such as job assignment by gender. Japan's ILM system together with increases in women's university graduation rates, heightened awareness of impending shortages in skilled labor, and socio-political pressures for greater inclusion of women in positions of authority may be modifying employers' view of work-family policies *as a cost* to a view that considers such policies *as a possible opportunity*. Because Japanese work-family policies allow women to take time off after childbirth with the guarantee that their job will be held for them, work-family policies may make it more feasible for employers to utilize female labor in a less marginalized way. The positive impact of work-family policies is likely to be concentrated on high-skilled women because the longer these women stay in the firm, the higher the return on employers' training investment. The weakness of the external labor market in Japan and the hesitation of Japanese employers to hire mid-career employees into authority positions also means that Japanese employers have a particularly difficult time replacing high-skilled employees. This feature of Japanese labor market structure incentivizes them to retain high-skilled women, especially as the country faces the certain prospect of a skilled labor shortage due to low fertility rates and small cohort sizes.

Based on our theoretical framework, we suggest that the welfare state paradox is an outcome of the interplay between a state's work-family policies and the specific type of skill regime. While Japanese work-family policies resemble those in Europe on the surface, European employers may well perceive the policies to be more costly; they must provide childcare leaves to employees whose skills, although not always easy to find, might be replaced by hiring workers from the external labor market within the same industry. These employers are thus not likely to enjoy the advantages equivalent to what Japanese employers hope to experience by implementing work-family policies within the Japanese labor market context. Therefore, it is more likely the *combination* of work-family policies and national labor market context that does or not produce a welfare state paradox, rather than work-family policies on their own.

We also suggest that further attention needs to be paid to organizations' internal practices. While all employers operate in

the context of national labor market institutions, their responses vary significantly according to differences in their internal organizational practices. Employers with organizational practices that exclude women from core jobs are not likely to fully embrace the opportunity generated by the combined influence of work-family policies and national labor market context. Even so, our findings suggest that employer behaviors change as the external environment changes. By investigating how shifts in labor supply conditions the impact of organizational practices, future research may be able to better explain the uneven implementation of work-family policies across employers.

In addition, in order to fully understand the success and failure of state work-family policies, how policy affects the behavior of employers and employees should be considered separately. While work-family policies appear to be going hand-in-hand with many large Japanese employers' motivation to promote women, it does not automatically follow that there will be a rapid increase of women in management; this cannot happen unless more women than in the past decide to remain in the workforce after marriage and childbearing. Despite work-family policy reforms, Japanese women continue to struggle in balancing full-time work with child-rearing demands, a struggle that is exacerbated by husbands' very low participation in housework and childcare (Nagase & Brinton, 2016). In addition, while human resource managers in Japanese firms encourage women to utilize work-family policies, they often expect women who use these policies to fully commit to the firm because the policies help "solve the problem" of work-family balance (Brinton & Mun, *in press*). Strikingly, around 60 percent of Japanese women leave the labor force entirely by the time they have their first child, and this figure has changed little over the past three decades (National Institute of Population and Social Security Research, 2012). Moreover, work-family policies that reinforce women's disproportionate childcare responsibilities by granting them extended childcare leave may impede some women's development of long-term work commitment by incentivizing them to focus on family demands (Gangl & Ziefle, 2015; Osawa, 2002). Ironically, then, such policies may increase employers' motivation to promote women but decrease some women's interest in being promoted to more demanding jobs. These potentially conflicting dynamics are very important to examine in future research.

Understanding the impact of work-family policies on women's employment and on gender equality in the workplace is a core question in the literature on work-family policies, welfare states, and gender inequality. This paper contributes to the literature by analyzing firm-level data that directly investigates employers' behavior and introduces the less-examined case of Japan, with a distinct labor market structure that continues to prioritize firm-specific skills and within-firm promotion rather than lateral hiring into managerial positions. Our effort underscores the importance of studying policy implementation in the context of countries' varied labor market institutions and organizational practices in order to better understand and predict policy outcomes and the mechanisms behind them.

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