CHAPTER 14

Employment Equality Policy and Gender Gap in Labor Market

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14.1 Introduction

Experiences in developed countries show that with economic development and the implementation of policies such as the *Equal Employment Opportunity Law*, women's participation in the labor market and society has improved, which has contributed to reducing the gender gap in the labor market and households.

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In China, although the gender gap during the planned economy period (1949–1977) was small, under the market-oriented reform period (post-1978) (also known as the "transition period"), the gender gap in the labor market has expanded (Gustafsson & Li, 2000; Li & Song, 2013; Li et al., 2011; Ma, 2021a; Song et al., 2017). The economic reform has had both direct and indirect effects on the expansion of the gender wage gap. For example, during the period of employment adjustment of state-owned enterprises (SOEs), the probability of becoming unemployed was greater for women than for men; there was a gender wage gap among re-employed workers, primarily because of discrimination against women (Knight & Li, 2004; Ma, 2008). In addition, because the gender wage gap in non-SOEs is larger than that in SOEs, the ownership reform promoted the rapid development of non-SOEs, leading to a further increase in the gender wage gap. Furthermore, unlike Japan and other developed countries, in which the trend of change in the gender wage gap has been from large to small, the change in the gender wage gap in China is a reverse phenomenon accompanying economic growth. During the market-oriented reform period, although the Chinese government has introduced a set of new policies addressing the gender gap in the labor market, the gender wage gap has widened (Ma, 2021a).

In contrast, since the 1980s, the Japanese government has enforced the implementation of *the Equal Employment Opportunity Law for Men and Women*, *Childcare/Nursing Care Leave Law*, *Basic Act for Gender Equality*, *Next Generation Law*, and *Law for Promotion of Women's Advancement*. It is expected that these policies may encourage more married Japanese women to participate in the labor market. In fact, the gender wage gap in Japan reduced from 1976 to 2017. However, most Japanese working women are non-regular workers (i.e., part-time workers), and the wage gap between regular and non-regular workers has increased in Japan.

According to the World Economic Forum and the World Bank's Gender Gap Index, the gender gaps in China and Japan are larger than those in other developed countries. Both Chinese and Japanese governments are trying to reduce the gender wage gap, but have been unable to address this problem completely. As Japan is a developed country with a large gender gap among other countries world over, this chapter conducts a comparative study on the issue between China and Japan.

This chapter is structured as follows: Sect. 14.2 introduces female employment promotion policies in China and Japan; Sect. 14.3 reviews

the trends in the gender wage gap in China and Japan; Sect. 14.4 summarizes the results of empirical studies on the gender wage gap and uses the latest survey data to investigate the gender wage gap based on the Blinder-Oaxaca decomposition method in two countries; Sect. 14.5 concludes this study and discusses policy implications.

14.2 Female Employment Promotion Policies in China and Japan

14.2.1 Female Employment Promotion Policy in China

As the level of economic development, economic policies, and systems have transformed since 1949 when the People's Republic of China was established, economic historians usually divide the Chinese economy into a planned economy period (1949–1977) and a market-oriented reform period (post 1978). In the period of the planned economy, with the "socialism restructuring campaign," the ownership of all firms was transferred to the government, giving rise to SOEs and collectively owned enterprises (COEs). In other words, only the public sector sustained during the planned economy period in China. The Chinese government emphasized gender equality as an important socialist ideology. The government propagated it by implementing equal employment policies and related policies to promote women's employment, as demonstrated by the slogan "women hold half of the sky." Gender equality was clearly pronounced in the *Constitution* and *Labor Contract Law*. Therefore, the gender gap in employment, wages, and occupation was much smaller during that era (Gustafsson & Li, 2000; Li & Song, 2013; Ma, 2018a, 2018b, 2021a; Meng, 2000).

Under the market-oriented reform period, the influence of market mechanisms has increased, which has enhanced China's economic growth (Lin et al., 1994). With progressive economic transition and economic growth, female labor force participation has decreased, and the gender wage gap has expanded. To address the gender disparity problem, the Chinese government has enforced the equal employment policies (Table 14.1).

In 1986, the regulations to protect women's rights to participate in the labor market were implemented. During the period of pregnancy, maternity leave, and breastfeeding, the company should not dissolve the labor

Table 14.1 Female employment promotion policies in China

Year	*Policy*	*Main content*
1986	Provisional Regulations on Institution of Labor Contract System in State-Owned Enterprises	During pregnancy, maternity leave, and breastfeeding, the company must not dissolve the labor contract, and should give the same treatment as regular worker for the same type of work
1993	Law of the People's Republic of China on Protection of Rights and Interests of Women	Emphasize gender equality. Gender cannot be a basis for hiring; hiring standards for women cannot be raised
1994	Labor Law of the People's Republic of China	The distribution of remuneration shall be based on the distribution of work, and the principle of equal pay for equal work shall be implemented for both men and women
2009	Labor Law of the People's Republic of China (2009 Amendment)	Female employees, during the childbirth and childbearing period, can avail at least 90 days of maternity leave
2012	Special Rules on the Labor Protection of Female Employees	Maternity leave is extended to 98 days
2016	The regulations of provinces	The number of days for paternity leave range from 7 to 30. The most common span is 15 days

Source Authors' creation based on Chinese government regulations

contract and should provide the same treatment as the regular workers for the same type of work.

The *Law of the People's Republic of China on Protection of Women's Rights and Interests*, published in 1993, emphasizes gender equality. It states that no company can deny employment opportunities on the basis of gender or raise recruitment standards for women. This rule is confirmed by the *Labor Law of the People's Republic of China* published in 1994. The Labor Law also stipulates that the distribution of remuneration shall be based on the distribution of work, and the principle of equal pay for equal work shall be implemented for both men and women. The *Labor Law of the People's Republic of China (2009 Amendment)*, published in 2009, states that women can take at least 90 days of maternity leave during childbirth and childbearing period. The *Special Rules on the Labor Protection of Female Employees* was published in 2012. According to this law, maternity leave has been extended to 98 days.

Until recently, men's paternity leave has not been included in any national-level law or regulation in China. However, the governments of some provinces have established *men's paternity leave policies* since 2016. The number of days for paternity leave differs across provinces. In provinces such as Tianjin and Shandong, paternity leave is regulated for seven days. In Henan, Yunnan, Gansu, and some other provinces, paternity leave is 30 days, according to the policies and regulations of local governments. In some provinces, the span ranges from 7 to 30 days, with the most common span being 15 days.

14.2.2 Female Employment Promotion Policy in Japan

14.2.2.1 Policies to Prohibit Sexism and Support Positive Employment Actions

Women's employment promotion policy in Japan was based on the *Factory Act* enacted in 1911 (enforced in 1916). The *Factory Act* stipulates employment restrictions, such as prohibiting women from working over 12 hours a day and working late at night (between 10 pm and 4 am). The *Factory Act* has been reformed several times, but employment restrictions on women have been gradually broadened, and regulations have been tightened.

The *Labor Standards Law* enacted in 1947 after World War II, it basically followed the employment restrictions for women in the *Factory Law*. However, as Japan entered the high economic growth phase, the number of female workers increased, and balancing work and family life became important. Therefore, the *Working Women's Welfare Law* was enacted in 1972. In this era, most people thought women should do housework rather than participate in the labor market, and this law reflected these views. However, during the deliberation of the congress (House of Representatives), the law was revised and the phrase "reduce gender discrimination" was added as the basic principle. Some people perceived that "this sprouted and led to the enactment of the *Equal Employment Opportunity Law for Men and Women*, but it took another 10 years or more before the Equal Employment Opportunity Law was enacted."

In 1985, the *Working Women's Welfare Law* was amended to enact an *Equal Employment Opportunity Law for men and women*. This law had been under consideration for many years as a part of legislation in Japan to ratify the *World Action Plan* adopted in the United Nations Women's Year in 1975, and the Convention on the *Elimination of All Forms of*

Discrimination against Women in 1979. However, while the law calls for equal employment opportunities for men and women, it merely prohibits gender discrimination in education, training, and welfare, in addition to the mandatory retirement age, retirement, and dismissal for which judgment case rules have already been established. Prohibiting discrimination against women regarding recruitment, placement, and promotion has become an obligation for companies. The provisions for women's protection in the *Labor Standards Law* have remained unchanged, and gender equality has not improved; however, women's protection has also been preserved.

Many companies were forced to respond when the *Equal Employment Opportunity Law for Men and Women* came into force in 1986. As a result, many companies, especially larger ones, have introduced course-based employment management systems since 1986. This system is a type of double-track employment management, consisting of a general employment course for training executive candidates, and a general employment course for training professionals. The former can help a worker develop a working career and become a manager. However, while selecting the former course, a worker must take workplace rotation (for example, leaving Tokyo to the local city) according to the company's request or order. Job seekers can select courses voluntarily, and many job seekers are new school graduates. The company decides to hire for each course and manages the employment. However, in actual operation, most of the hires in the general employment course for training executive candidates were men, and most of the general employment course hires for training professionals were women, which did not meet the purpose of the law to reduce the gender gap in the workplace.

In 1995, ten years after the enforcement of the *Equal Employment Opportunity Law*, the government evaluated the policy. In the process, indirect discrimination, positive action, and sexual harassment issues were discussed, along with the prohibition of sex discrimination and abolition of women's protection provisions. The law was amended in 1997 to prohibit discrimination against women in recruitment, placement, and promotion and to abolish women's protection provisions, such as a ban on late-night work. A new provision has been established that allows the state to provide consultation and other assistance for the positive actions taken by employers (efforts to eliminate de facto differences between men and women). Furthermore, to prevent sexual harassment in the workplace, a new provision has been established that requires employers

to consider employment management and maternal health management measures.

The *Equal Employment Opportunity Law* was revised in 2006. In this amendment, the prohibition of discrimination against women forbids gender discrimination. This amendment has changed the motto from "give women equal opportunities as men" to "give equal opportunities regardless of gender." Simultaneously, the revised law stipulates the prohibition of indirect discrimination. In addition, a ban on dismissal due to pregnancy, childbirth, and availing prenatal and postnatal leave have been added, and disadvantageous treatments other than dismissal have also been banned. Regarding sexual harassment prevention regulations in the workplace, men have been also added to the regulations, which became a mandatory provision.

During this period, the system was developed so that women could participate in the same fields as men other than the field of employment. Consequently, the *Basic Act for Gender Equality* was enacted in 1999. This law is philosophical, and emphasizes five philosophies. In 2014, the *Act on the Promotion of Female Advancement* was enacted, which aimed to further promote women's participation in society and increase the number of women in social status. This law evaluates the situation regarding women's advancement, plans efforts to promote women's advancement, and announces the contents and achievement targets for national and local governments and private companies with more than 300 employees.

14.2.2.2 Childcare Leave System and Work-Life Balance Policy

Article 11 of the *Working Women's Welfare Act* of 1972 stipulates an obligation to make efforts to provide childcare facilities. Although only a few companies allowed childcare leave, it took a long time for it to become popular. In 1975, the *Act on Childcare Leave* for Specific Occupations, which stipulates childcare leave for female teachers and female nurses, was enacted, but the target group was civil servants. Private companies were not covered. Subsequently, the Liberal Democratic Party and the Socialist Party took the lead in discussing the development of a childcare leave system in the congress, the government's legislation was also developed, and the *Childcare Leave Law* was enacted in 1991.

Unlike the *Working Women's Welfare Law* and *Childcare Leave Law* for Specific Occupations, which were applied only to women, the *Childcare Leave Law* states that both men and women can take childcare leave.

However, this law does not apply to daily employees and non-regular employees. In addition, childcare leave is taken only once when the child is under one-year old, and the childcare leave allowance is not paid, as per the "No Work No Pay Principle."

In 1995, it was amended to the *Childcare/Nursing Care Leave Law* (formally, "Act on the Welfare of Workers Carrying Childcare or Family Care, such as Childcare Leave"), which includes long-term care as the reason for the leave. At the same time, the childcare leave system has been fully applicable to all workers, including workers employed in small- and medium-sized enterprises, and 25% of pre-holiday wages are now paid from the employment insurance system as childcare leave benefits. As shown in Table 14.2, the rate of childcare leave benefits changed frequently.

In 2004, the *Childcare/Nursing Care Leave Law* was amended to include an exception that allows employees to extend their childcare leave up to one and a half years, in cases where children are unable to enter a nursery center. In addition, fixed-term contract workers who meet certain requirements can avail childcare leave.

Table 14.2 Changes in childcare leave benefits (employment insurance) in Japan

Implemented date	*Childcare leave benefit rate*			*Qualified person to take childcare leave*
	Basic benefit (%)	*Return to workplace benefit* (%)*	*Total (%)*	
April 1, 1992	–	–	0	
April 1, 1995	20	5	25	Regular worker
April 1, 2001	30	10	40	
April 1, 2005	30	10	40	Regular worker
April 1, 2007	30	20	50	+ a part of
April 1, 2010	50	–	50	fixed-term
April 1, 2014	6 (More than 180 days: 50%)	–	58.5–67	contract worker**

Note

1. Return to work benefits are only paid when returning to the original company after childcare leave

2. **From January 2017, the applicable conditions for fixed-term contract workers have been relaxed

Source Authors' creation

According to the revised law of 2009, exemption from overtime working hours is obligatory, and if a worker raising a child under the age of three offers to work shorter hours (six hours a day), the company may, in principle, prevent it. In addition, when parents take childcare leave at the same time or in shifts, *Father and Mother Childcare Leave Plus* has been introduced, which allows employees to take childcare leave, until their children are one year and two months old.

According to the revised law of 2017, the age of a child not being able to enter nursery has been changed from from one and a half to two years old. At the same time, it has become possible to take children's nursing leave and nursing leave in half-day units (half of the prescribed working hours) instead of in one-day units. In addition, the prerequisites for fixed-term contract workers to take childcare leave have been relaxed as follows: (1) employees who have been employed in the past year or more at the time of application, and (2) the employment contract will not be terminated until the child is one and a half years old. In addition, the amendment also stipulates a review of the range of children subject to childcare leave and obligations to take preventive measures against maternity harassment.

According to the revised law of 2021, to encourage men to avail childcare leave, it is mandated that the company creates an employment environment that makes it easy to earn childcare leave, such as training on childcare leave, fathers' childcare leave, and establishment of a counseling system. At the same time, it is stated that the company should create childcare leave for men (postnatal father childcare leave) that male workers can take at the time of childbearing, thereby increasing the male workers' probability of taking childcare leave, and taking it twice. Furthermore, it is obligatory for companies with 1,000 or more employees to announce the status of taking childcare leave at least once per year. Fixed-term contract workers are also eligible for childcare leave unless their employment contract is terminated, or the child is one and a half years old.

Apart from the *Child Care and Nursing Care Leave Law*, the *Act on Advancement of Measures to Support Raising Next-Generation Children* was enacted in 2004, which aimed to encourage companies and governments to be more actively involved in balancing workers' family and work lives. The law makes it obligatory for companies to develop action plans for balancing employees' work and their parenthood responsibilities.[1]

Furthermore, to encourage companies to voluntarily support the next generation, companies that meet certain criteria, such as achieving the goals set in the action plan, would be certified by the Minister of Health, Labor, and Welfare. Initially, the law was effective only until 2015, but it was extended for another 10 years to be in force until 2025.

14.2.2.3 Policies for Part-Time Workers

In Japan, most part-time workers are students and married women, and there is a wide difference in working conditions, such as wages and welfare, from regular workers; most regular workers are men.

In Japan, policies for part-time workers were pronounced in the late 1960s, but the actual measures were not taken until the 1980s, when the establishment of a part-bank (an employment agency dedicated to part-time workers) and efforts to clarify working conditions were carried out.

The *Act on Improving Employment Management of Part-Time Workers* ("*Part-time Labor Act*") was enacted in 1993. This law encourages companies to improve employment management for part-time workers, who are considered second-class to regular workers, by ensuring proper working conditions for part-time workers, implementing education and training programs, and enhancing welfare programs.

The *Part-time Labor Law* was amended in 2007 to encourage companies to promote the conversion of part-time workers to regular workers and to balance the treatment of full-time (regular) and part-time workers. Furthermore, the 2015 amendment prohibits discriminatory treatment of part-time workers who have a fixed-term employment contract if they have the same job description and human resource management system as regular workers.

The *Work Style Reform Promotion Law* enacted in 2018 requires companies to pay equal pay for equal work, reduce discrimination in treatment between regular employees and part-time workers, shorten working hours, and extend holiday leave.

14.3 Gender Gap in Chinese and Japanese Labor Markets

In this section, we investigate the trends of the gender gap (mainly the gender wage gap) in China and Japan, and compare the situations between these two countries.

14.3.1 Gender Gap in China

According to international comparisons of data on the percentage of female wages to male wages, the gender wage gap in China was estimated to be 82.7% in 2002 (Song et al., 2017), while the same indicator in 2015 stood at 81.1% in the USA, 82.3% in the UK, 81.3% in Germany, 88.0% in Sweden, 67.6% in Korea, and 72.2% in Japan (Fig. 14.2). These figures indicate that the gender wage gap is larger in China than in the Nordic social democracies, but is much smaller than in Korea and Japan, and is almost the same as in most developed countries.

How has the gender wage gap changed during the market-oriented reform period in China? In theory, the market mechanism could contribute to reducing the gender wage gap because, in a competitive market, companies should determine wage levels based on a worker's productivity, which may reduce unreasonable discrimination. However, the growth of privately owned enterprises (POEs) would have a stronger tendency to discriminate against female workers than SOEs (Ma, 2021a). The proportion of employees in the private sector to the total number of workers in urban regions reached around 80% in 2020 (NBS, 2021). Furthermore, with the progress of state-owned enterprise reforms, which promote human resource management autonomy in SOEs, the influence of gender equality policies on employment and wage determination in the public sector has weakened. When discretionary power becomes stronger in the public sector, the organizational behaviors of SOEs resemble those of POEs, and the gender wage gap is likely to increase in SOEs as well. In China, from the latter half of the 1980s to the present, the rapid growth of POEs and the promotion of management autonomy in SOEs are likely to increase discrimination against female workers in both the sectors (Ma, 2021a). As the market-oriented economic reform may contribute to widening or reducing the gender wage gap, we cannot obtain a clear conclusion on the change in the gender wage gap during the economic

transition period in China from an economic theory perspective. Official data and empirical studies have provided evidence on this issue.

As we could not obtain official data on the long-term change in the gender wage gap in China, we used the meta-analysis method to calculate the trends in the gender wage gap in China from the 1980s to the 2020s (Iwasaki & Ma, 2020). Iwasaki and Ma (2020) conducted a meta-analysis based on 90 English and 111 Chinese papers,[2] they calculated the partial correlation coefficient[3] based on the coefficient of gender dummy variables in wage functions. Figure 14.1 displays the calculation results. The slope of the black line in Fig. 14.1 is estimated to be negative and statistically significant at the 1% level, and its coefficient implies that, as the average estimation period approaches the present time year by year, the gender wage gap increases by 0.0027 in terms of the period.

According to human capital theory (Becker, 1964; Mincer, 1974), in a perfectly competitive market, the wage level of a worker is determined by the labor productivity, which is related to the worker's human capital (e.g., education attainment level, years of experience, etc.). Therefore, gender differences in educational attainment levels may affect the gender

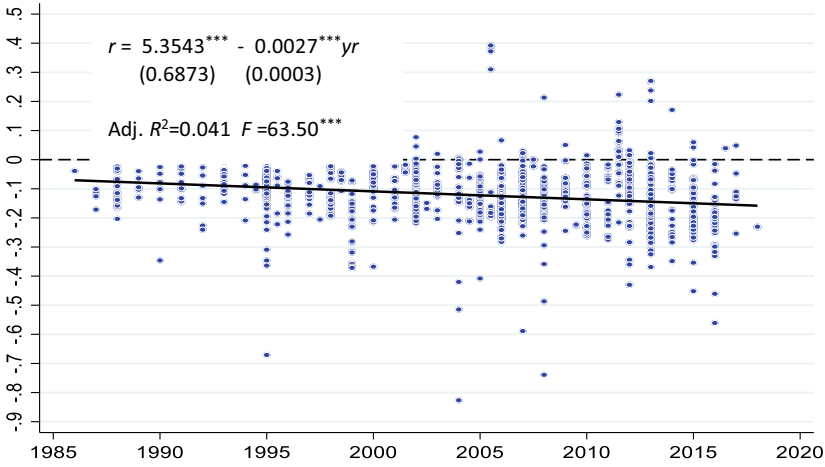

Fig. 14.1 Trends of gender wage gap in China (*Note The* value on the vertical axis is the estimated partial correlation coefficient in the meta-analysis, and the value on the horizontal axis is the estimation year [*yr*]. *Source* Authors' creation based on the Fig. 2 in Iwasaki and Ma [2020])

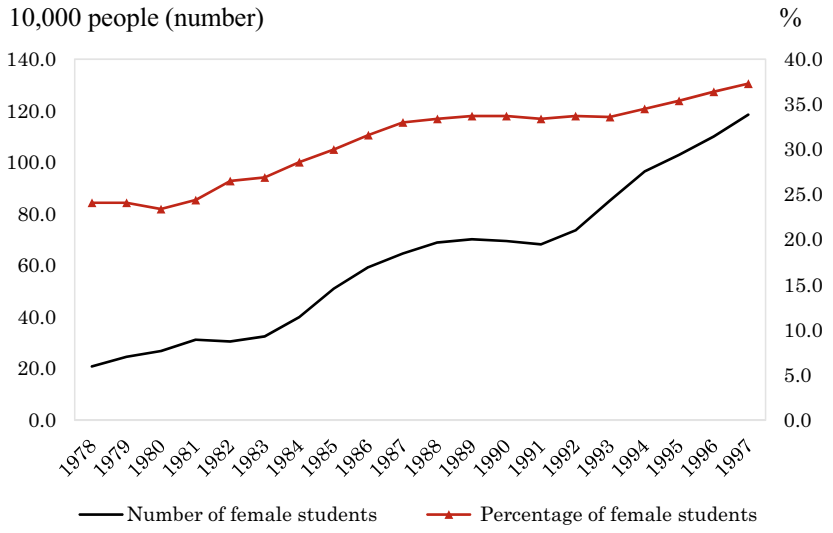

Fig. 14.2 Trends in the number and percentage of female university students in China (*Source* Authors' creation based on data from the *China Education Statistical Yearbook* for each year)

wage gap. Figure 14.2 shows the trends in the number and percentage of female university students in China, which increased between 1978 and 1997. Since 1999, the Chinese government has implemented a higher education expansion policy to promote the development of higher education in China (Ma, 2018b; 2021a). Thus, the number and percentage of female college students have increased by a large extent in the current period, which might reduce the gender differences in educational attainment and contribute to reducing the gender wage gap.

14.3.2 Gender Gap in Japan

Figure 14.3 displays the trends of the gender wage gap in Japan. The gender wage gap is calculated using the data on the regular monthly salary (excluding overtime pay) from the Basic Statistical Survey on Wage Structure conducted by the Ministry of Health, Labor, and Welfare. We calculated the wage of women when the number of men was 1; the wage of women, which was only about 59.6% of that of men in 1985, reached

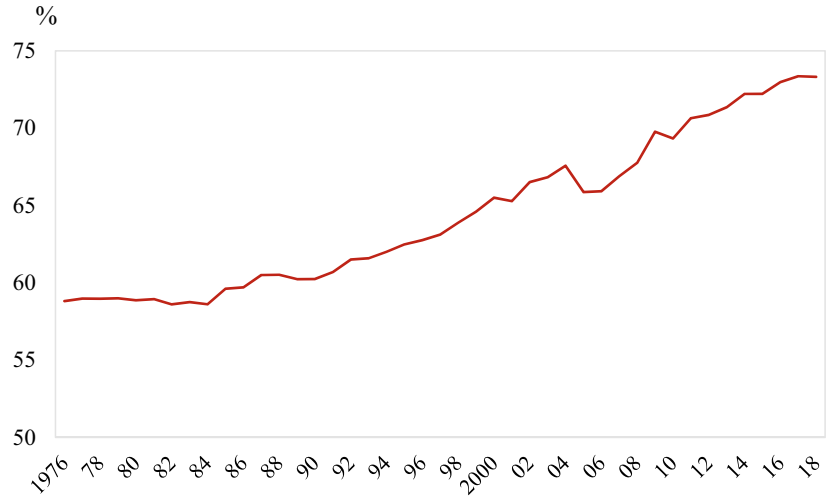

Fig. 14.3 Trends in gender wage gap in Japan (*Note* Male wage = 100, the "fixed salary" is used, which is the earning income excluding bonuses and allowances. *Source* Authors' creation based on data from the Wage Structure Basic Statistical Survey conducted by the Ministry of Health, Labor, and Welfare, Japan)

73.3% in 2018, and the gender wage gap did not change from 1976 to 1984. The wage gap has declined continuously since the mid-1980s. However, the wages of Japanese women are still only three-quarters of that of men, and the gender wage gap is still larger than that of China and other developed countries.

As described above, the wage gap may reflect the differences in workers' human capital accumulation. When the quality and quantity of school education and vocational training differ according to gender, a gender wage gap becomes inevitable.

Figure 14.4 shows the trends in the university enrollment rate in Japan from 1970 to 2018. The university enrollment rate of women was around 10% until the beginning of the 1990s, with a large gender difference. After the 1990s, the enrollment rate of women increased and the gender difference narrowed, but even in 2018, there was still a gender difference of about 6.3% in Japan.

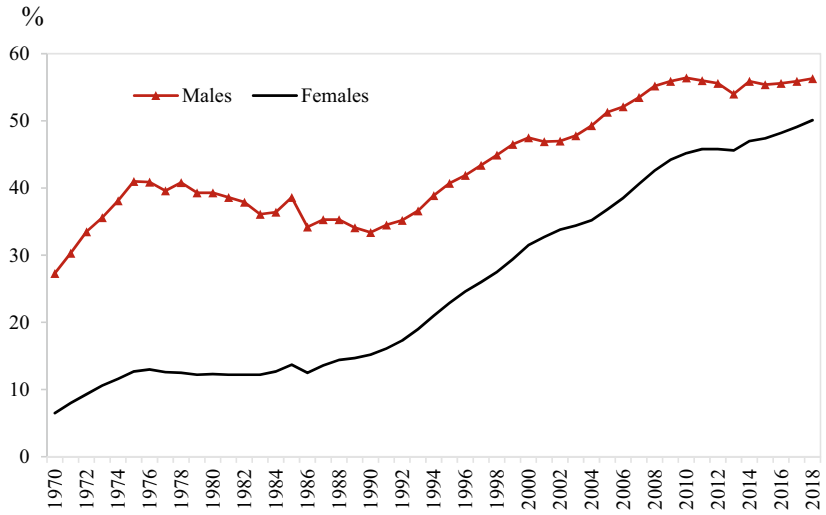

Fig. 14.4 University (undergraduate) enrollment rate (including high school graduates from previous years) in Japan (*Source* Authors' creation based on data from the School Education Basic Survey conducted by the Ministry of Education, Culture, Sports, Science, and Technology, Japan)

The gender difference in the enrollment rate of schools also affects the composition of workers' educational backgrounds. Table 14.3 shows the percentage of workers by educational background and the percentage of female workers in a particular educational background from 1982 to 2017. There was no significant change in the proportion of high school graduates, but the proportion of university graduates among workers increased. The percentage of female workers was higher among high school and junior college graduates, but the percentage of college graduates was only 30.7% in 2017.

Vocational training can also affect human capital accumulation and its quality and quantity may differ between men and women. The data from the Basic Survey on Capacity Development (Individual Survey) conducted by the Ministry of Health, Labor, and Welfare shows that 43.6% of men and 25.6% of women have taken OFF-JT provided by companies. In addition, the average OFF-JT attendance time (total) for men is 23.6 hours, while that for women is only 18.3 hours, suggesting that women have fewer opportunities to take vocational training compared to men in Japan.

Table 14.3 Share of workers by educational background in Japan

Unit: %

		1982	*1992*	*2002*	*2012*	*2017*
Senior high	Total	45.6	48.9	46.4	45.5	43.3
	Females	41.3	43.6	43.0	43.7	44.2
Junior college	Total	6.8	10.6	15.3	16.6	17.8
	Females	58.2	65.1	66.5	68.6	68.7
College	Total	12.3	16.1	21.5	27.7	30.9
	Females	12.5	16.1	21.6	27.6	30.7

Source Authors' creation based on data from the Employment Structure Basic Survey conducted by the Ministry of Internal Affairs and Communications, Japan

Mincer and Polacheck (1974) advocate that household gender role division has a significant influence on the human capital formation of workers. Under gender role division, to accommodate more housework and childcare, the labor supply is less for women than for men. In Japan, the curve of the female labor force participation rate by age group is an M-shaped curve (see Fig. 14.5), in which the female labor force participation rate aged 25–39 years is lower than that in other age groups. As employers anticipate that women easily give up their jobs for housework and family care (e.g., childcare, parent care), human capital investment is less efficient for women than men; therefore, companies tend to have lower incentives to provide vocational training to female workers.

Additionally, labor demand tends to be more biased toward men than toward women in secondary industries. Table 14.4 shows the changes in the share of workers by sector and the share of women in each sector. The share of women in the secondary sector is constant at around 30%, while the share of women in the primary and tertiary sectors has remained between 35 and 50%. The share of women has increased, especially in the tertiary sector, where the share of total workers (including men and women) has been increasing. Employment in the secondary sector is stable and wage levels are higher than in other sectors, while in the tertiary sector, the job change rate is higher and the wage level tends to be lower. The sector-wise stability of employment and the difference in wage levels also influence the gender wage gap.

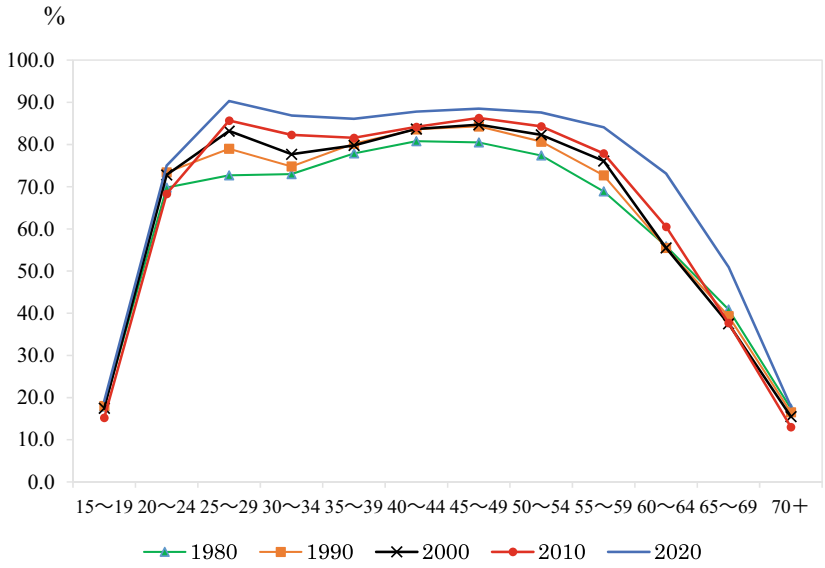

Fig. 14.5 Female labor force participation rate by age group in Japan (*Source* Authors' creation based on data from the Labor Force Survey conducted by the Statistics Bureau, Ministry of Internal Affairs and Communications, Japan)

Table 14.4 Share of workers by sector in Japan

		Unit: %				
		1980	*1990*	*2000*	*2010*	*2017*
Primary	Total	10.9	7.1	5.0	4.0	3.3
	Females	47.5	45.2	43.8	39.3	36.8
Secondary	Total	33.6	33.3	29.5	23.7	23.3
	Females	29.5	31.0	27.9	25.9	26.1
Tertiary	Total	55.5	59.6	65.5	72.3	73.3
	Female	41.1	43.7	46.4	48.5	50.0

Source Authors' creation is based on data from the Labor Force Survey conducted by the Statistics Bureau, Ministry of Internal Affairs and Communications, Japan

14.4 Empirical Studies on Gender Wage Gap in China and Japan

What determines the gender wage gap in China and Japan? The gender wage gap depends on either: (1) the gender differences in endowments (e.g., gender difference in education attainment, gender occupational segregation), or (2) gender differences in factor prices (e.g., the rate of return on human capital for the same job). For example, when we discuss the reduction of the gender wage gap in Japan, what we should discuss is how gender differences in endowment (e.g., education, occupation) have narrowed, and whether the gender difference in factor price, which is related to discrimination against women in the workplace, has narrowed. We introduce an empirical method to measure these two components.

14.4.1 Decomposition Methods of Gender Wage Gap

To investigate the influence of two types of components (gender endowment difference and gender difference in factor price) on the gender wage gap, numerous empirical studies based on the Blinder-Oaxaca decomposition method (Blinder, 1973; Oaxaca, 1973) have been used in empirical studies. In this method, the coefficients obtained from the wage functions for men and women are estimated separately (see Eqs. [14.1] and [14.2]), and the average values of the independent variables are used to decompose the gender wage gap.

$$\ln W_m = a_m + \beta_m X_m + u_m \tag{14.1}$$

$$\ln W_f = a_f + \beta_f X_f + u_f \tag{14.2}$$

In Eqs. (14.1) and (14.2), $\ln W_m$ and $\ln W_f$ are the average logarithmic wages of men and women; X_m and X_f denote a set of variables that affect wage levels (e.g., education, years of experience, occupation, industry, etc.); u_m and u_f are error items following a standard normal distribution with a mean of 0, respectively.

The Blinder-Oaxaca decomposition method is used to decompose the determinants of the gender wage gap into two channels: (i) the gender endowment difference (endowment effect), and (ii) the gender difference in the evaluated coefficient of each variable that are related to discrimination against women (factor price effect) (Becker, 1957). Equations (14.3)

and (14.4) describe the model.[4]

$$\overline{\ln W}_m - \overline{\ln W}_f = \beta_{\mathrm{m}}\left(X_m - X_f\right) + (\beta_{\mathrm{m}} - \beta_{\mathrm{f}})X_f \tag{14.3}$$

$$\overline{\ln W}_m - \overline{\ln W}_f = \beta_{\mathrm{f}}\left(X_f - X_m\right) + (\beta_{\mathrm{f}} - \beta_{\mathrm{m}})X_m \tag{14.4}$$

In Eqs. (14.3) and (14.4), $\overline{\ln W}_m - \overline{\ln W}_f$ denotes the gender wage gap; $\beta_{\mathrm{m}}\left(\sum X_m - \sum X_f\right)$ or $\beta_{\mathrm{f}}\left(\sum X_f - \sum X_m\right)$ denotes the gender endowment difference; and $(\beta_m - \beta_f)\sum X_f$ or $(\beta_f - \beta_m)\sum X_m$ express the gender difference in factor price. $\sum X_f, \sum X_m$.

Furthermore, the change in the gender wage gap can be decomposed using Eq. (14.5).

$$\begin{aligned}
&\text{If } \Delta\overline{\ln W} = \overline{\ln W}_m - \overline{\ln W}_f,\\
&\quad \Delta X = (X_m - X_f),\ \Delta\beta = \left(\beta_m - \beta_f\right),\\
&\qquad \Delta\overline{\ln W_t} - \Delta\overline{\ln W_s} = \sum \beta_{ft}(\Delta X_t - \Delta X_s)\\
&\qquad\quad + \sum \Delta\beta_t\left(X_{ft} - X_{fs}\right)\\
&\qquad\quad + \sum X_{ft}(\Delta\beta_t - \Delta\beta_s) + \sum \Delta X_t\left(\beta_{ft} - \beta_{fs}\right)\\
&\qquad\quad + \sum \Delta x_t \Delta\beta_t - \sum \Delta X_s \Delta\beta_s
\end{aligned} \tag{14.5}$$

The first and second terms on the right side are the decompositions of the changes in gender endowment difference. The first term shows the change in the gender endowment difference, the second term shows the change in the endowment of the women themselves, the third term shows the change in the gender difference in factor price, and the fourth term shows the change in factor price for women themselves. The subscripts t and s indicate the year: $t < s$. $\Delta\overline{\ln W_t} - \Delta\overline{\ln W_s} > 0$ indicates that the gender wage gap has narrowed.

We summarize the results of previous studies and conduct empirical studies based on these decomposition models in China and Japan in the following section.

14.4.2 Empirical Study for China

Numerous empirical studies have been conducted on the gender wage gap in China (Iwasaki & Ma, 2020). We only summarize the representative empirical studies for China, as follows.

Most empirical studies using the Blinder-Oaxaca method reported that both the endowment and factor price components contribute to the formation of the gender wage gap in China, and pointed out that the contribution rate of the factor price component is greater than that of the endowment component. These results suggest that workplace discrimination against women is the main factor contributing to the formation of the gender wage gap in China.

As the analyzed period, survey data, independent variables, and decomposition methods used are different, the results in different studies cannot be directly compared (Iwasaki & Ma, 2020). To reduce the measurement bias caused by using different survey data, we summarized the results based on data from the Chinese Household Income Project survey (CHIPs) of 1988, 1995, 2003, and 2013 for the urban local residents in Table 14.5.

The results in Table 14.5 indicate that the contribution rates of the factor price component were 52.49% in 1988 and 63.20% in 1995 (Gustafsson & Li, 2000); 52.0% in 1995, 69.0% in 2002, and 77.7% in 2007 (Li et al., 2011); 72.4% (1995), 75.0% (2002), 73.4% (2007), and 74.1% (2013) during the period 1995–2013 (Song et al., 2017); 40.1% in 2002 and 68.9% in 2013 (Ma, 2021a). Although the dependent variables were different in these studies, the results for the same survey year were

Table 14.5 Summary of the decomposition results of gender wage gap in China

Year		*Endowment*	*Price*
1988	Gustafsson and Li (2000)	0.475	0.525
1995		0.368	0.632
1995	Li et al. (2011)	0.480	0.520
2002		0.310	0.690
2007		0.220	0.777
1995	Song et al. (2017)	0.276	0.724
2002		0.250	0.750
2007		0.266	0.734
2013		0.259	0.741
2002	Ma (2021a, 2021b)	0.599	0.401
2013		0.311	0.689

Note The Blinder-Oaxaca decomposition method was used
Source Authors' creation based on Gustafsson and Li (2000), Li et al. (2011), Song et al. (2017), and Ma (2021a). The studies used the data from the CHIPs of 1988, 1995, 2003, 2007, and 2013

different, indicating that the contribution rate of the factor price component increased, while that of the endowment component declined during 1988–2013. This implies that although both the endowment component and factor price component contributed to the formation of the gender wage gap in China from 1988 to 2013, the influnece of the factor price component increased, which contributed to widening the wage gap during the period. The results may be caused by the reduction of gender differences in education (see Fig. 14.2) and the increase in discrimination against women in the workplace with the transition to a market-oriented economy.

For migrant workers, the contribution rates of the factor price component was 74.32–84.38% in 2008 (Li & Yang, 2010) and that for all residents and migrants in urban China was 49.18% in 1996 (Meng & Zhang, 2001). Moreover, the contribution rate of the factor price component by wage percentiles was 86.08–101.80% in 2006 and 45.31–91.73% in 2009 (Ma et al., 2013).

Some empirical studies have also focused on the effect of segmentation by sector on the gender wage gap in China. Wang (2005) and Li and Ma (2006) analyzed the influence of occupational segregation on the gender wage gap. Ma (2018a) found that the segmentation of the ownership sector (e.g., SOEs and POEs) affects the gender wage gap in urban China. Ge (2007) and Wang and Cai (2008) analyzed the influence of segmentation by industry type on the gender wage gap. They reported that the factor price component in intra-sector differentials drives the gender wage gap in China.

To investigate the gender wage gap in the current year, we used the latest survey data from the Chinese Household Income Project Survey CHIPs of 2018 to conduct the decomposition analysis. The results are summarized in Table 14.6. Comparing the results in Table 14.5, it is clear that even in the current year (2018), the contribution rate of the factor price component (69.3%) is even greater than that of the endowment component (30.7%), suggesting that discrimination against women in the workplace still exists and significantly contributes to widening the gender wage gap in China. The contribution rates of education in both the endowment and factor price components are negative values, suggesting that both the reduction of gender difference in educational attainment and the rise in the rate of return on education among women contribute to reducing the gender wage gap. In contrast, gender occupational segregation (18.8%) and discrimination against women during

Table 14.6 Decomposition results of gender wage gap in China

	Value		*Percentage*	
	Endowment	*Price*	*Endowment (%)*	*Price (%)*
Wage gap = 0.208	0.064	0.144	30.7	69.3
Education	−0.011	−0.089	−5.2	−42.6
Year of experience	0.015	0.134	7.3	64.3
Health	0.000	−0.028	0.0	−13.6
Han	0.000	−0.009	0.2	−4.5
CPC	0.006	−0.007	2.7	−3.2
Child	−0.001	0.073	−0.5	35.3
Occupation	0.039	−0.212	18.8	−102.1
Ownership	0.005	0.038	2.5	18.1
Industry	0.012	0.149	5.7	71.6
Region	−0.001	0.001	−0.8	0.5
Constant	0.000	0.094	0.0	45.6

Note The Blinder-Oaxaca decomposition model was used. CPC: membership in the Communist Party of China

Source Authors' calculations based on the data from CHIPs of 2018

the motherhood period (children: 35.3%) contributed to expanding the gender wage gap. The results indicate that although the Chinese government enforced equal employment policies and maternity leave regulations during the economic transition period, gender occupational segregation and motherhood penalties still exist in China.

14.4.3 Empirical Study for Japan

Table 14.7 summarizes the decomposition results from representative empirical studies on the gender wage gap in Japan. Each study used microdata from the Wage Structure Basic Statistical Survey conducted by the Ministry of Health, Labor, and Welfare, but the dependent and independent variables differed among these studies. Higuchi (1990) estimated the gender wage gap in 1978, 1983, and 1988, and used the actual wage value as the dependent variable instead of the logarithm value. Yoshioka (2015) uses $\ln W_f - \ln W_m$ as the index of the gender wage gap instead of $\ln W_m - \ln W_f$. Furthermore, it should be noted that the independent variables used in each study are also slightly different.

Table 14.7 Summary of the decomposition results of gender wage gap in Japan

Year		*Difference*	*Endowment*		*Price*	
		Value	*Value*	*Percentage (%)*	*Value*	*Percentage (%)*
1978年	Higuchi (1990)	0.61	0.35	57.3	0.26	42.7
1983年		0.59	0.31	53.1	0.28	46.9
1988年		0.59	0.33	55.1	0.27	44.9
1990	Kawaguchi (2008)	0.48	0.20	40.3	0.30	59.7
2000		0.41	0.14	35.0	0.26	65.1
2007	Yoshioka (2015)	0.41	0.22	53.2	0.19	46.8
2010		0.38	0.20	52.5	0.18	47.5
2013		0.36	0.19	52.6	0.17	47.4

Note Higuchi (1990) estimated wages using actual values rather than logarithms. The Blinder-Oaxaca decomposition method was used in these studies
Source Authors' creation based on Higuchi (1990), Kawaguchi (2008), and Yoshioka (2015)

The results in Table 14.7 indicated that the gender wage gap has declined year on year, but there are no significant changes in the contribution ratios of gender endowment difference and gender difference in factor price. In other words, the results indicate that the improvement of the employment environment for women has the same effect on both the gender endowment difference and the gender difference, in factor price and that the gender wage gap has declined. However, the results were obtained from different studies, and there is an urgent need to draw conclusions here.

We then investigated the gender wage gap over the long term using the same estimation formula as above. We used data from the Wage Structure Basic Statistical Survey conducted by the Ministry of Health, Labor, and Welfare, Japan. Because it is difficult to obtain microdata retroactively, we used data aggregated by gender, age, educational background, industry, and company size. The subjects of the analysis are general workers and do not include part-time workers.[5] The dependent variable is the hourly wage (logarithm value), which is the monthly salary including overtime and bonuses, divided by the total monthly working hours.[6,7] Hourly wages are sadjusted based on the 2020 consumer price index (comprehensive) to enable comparisons over time. Age and its squared term, years of experience and its squared term, educational background dummy, industrial dummy, and company size dummy were used as the independent variables. The wage function was estimated using the OLS model and the

number of workers was used as the weight. The results are shown in Table 14.8.

The results in Table 14.8 also indicate that the gender wage gap has declined from 1981 to 2018, but the changes in the contribution rates of the gender endowment difference and gender difference in factor price differ from those in Table 14.7. The results reveal that the gender endowment difference narrowed significantly, and its contribution to the gender wage gap decreased significantly. On the contrary, the gender difference in factor price has decreased year on year, but the change is small, and its contribution to the gender wage gap has become larger in the current period. The results suggest that the improvement in the employment environment for women had a significant effect on reducing the gender endowment difference rather than reducing the gender difference in factor price. Furthermore, to compare the effect size of gender endowment difference and gender difference in factor price by year, taking the value in 1981 as 1, we obtain 0.81 and 0.97 in 1990, 0.33 and 0.98 in 2000, 0.48 and 0.86 in 2010, 0.36 and 0.59 in 2018, respectively. It can be postulated that improving the employment environment for women had a significant effect on reducing the gender wage gap after the 2000, and there was no significant effect immediately after the enactment of the *Equal Employment Opportunity Law* and the *Childcare and Nursing Care Leave Law*.

The decomposition results based on the model expressed in Eq. (14.5) are summarized in Table 14.9.

Table 14.8 Decomposition results of gender wage gap in Japan

Year	*Difference*	*Endowment*		*Price*	
	Value	*Value*	*Percentage (%)*	*Value*	*Percentage (%)*
1981	0.543	0.259	47.70	0.306	56.35
1990	0.509	0.210	41.26	0.298	58.55
2000	0.382	0.088	23.04	0.299	78.27
2010	0.359	0.100	27.86	0.256	71.31
2018	0.305	0.092	30.16	0.182	59.67

Note The Blinder-Oaxaca decomposition method was used
Source Authors' calculations based on data from the Wage Structure Basic Statistical Survey conducted by the Ministry of Health, Labor, and Welfare, Japan

Table 14.9 Decomposition results of the change of gender wage gap in Japan

	Endowment		*Price*	
	$\beta(\Delta x - \Delta x')$ *Change in gender endowment difference*	$\Delta\beta'(x - x')$ *Change in endowment of women*	$X(\Delta\beta - \Delta\beta')$ *Change in gender difference in factor price*	$\Delta x'(\beta - \beta')$ *Change in factor price for women*
1981–1990	−0.002	0.068	−0.088	0.03
1990–2000	0.043	−0.054	−0.07	0.001
2000–2010	−0.079	0.088	0.023	−0.005
2010–2018	0.005	0.003	0.192	−0.11

Source Authors' calculations are based on data from the Wage Structure Basic Statistical Survey conducted by the Ministry of Health, Labor, and Welfare, Japan

First, from 1981 to 1990, the gender wage gap narrowed by approximately 0.34 points. The results of the change in the gender wage gap indicated that there was almost no change in gender endowment difference over time, and that the change in endowment of women themselves reduced the wage gap. In addition, the gender difference in the factor price contributed to the widening of the wage gap, whereas the change in the factor price for women contributed to its reduction. During this period, the *Equal Employment Opportunity Law* was implemented, which had a significant effect on women's endowment and factor prices, leading to a reduction in the gender gap during this period. However, it seems like that the influence of female employment promotion policies on the reduction of gender difference in factor price was not significant.

From 1990 to 2000, the *Child Care Leave Law*, *Part-time Labor Law,* and *Equal Employment Opportunity Law for Men and Women* were implemented. During this period, the gender wage gap narrowed by approximately 0.13 points. The change in gender endowment difference contributed to the reduction in the wage gap, while the change in the endowment of women themselves, and the change in the gender difference in factor price contributed to widening the gender gap.

The *Basic Act for Gender Equality* and the revision of the *Child Care and Nursing Care Leave Law* were enforced from 2000 to 2010. During this period, the gender wage gap narrowed by approximately 0.02 points. The changes in gender endowment difference contributed to the widening of the wage gap, while the changes in the endowment

of women themselves, and the changes in the gender difference in factor price contributed to the reduction of the wage gap.

From 2010 to 2018, the *Act on the Promotion of Women's Advancement* was implemented and the *Child Care and Nursing Care Leave Act* was revised. During this period, the gender wage gap narrowed by approximately 0.05 points. The change in the factor price of women workers themselves contributed to the widening of the gender wage gap, but the changes in other factors contributed to the reduction of the wage gap. In particular, the change in gender difference in factor price significantly contributed to the reduction of the wage gap, suggesting that the implementation of the *Act on the Promotion of Women's Advancement* had a significant effect on reducing the gender difference in the factor price.

14.5 Conclusions

In this study, using published official data and survey data, we discuss the trends in the gender wage gap and investigate the determinants of the gender wage gap in China and Japan based on the Blinder-Oaxaca decomposition model. The two main conclusions are summarized as follows.

First, although the Chinese government enforced gender equality in the workplace and society during the planned economy period and enforced the implementation of equal employment policies during the transition period, the gender wage gap expanded from the 1980s to the 2010s. The decomposition results indicate that the contribution rate of the factor price component is greater than that of the endowment component, and the decomposition results based on the latest survey data from CHIPs of 2018 also confirm the conclusions. These results indicate that discrimination against women is the main contributor to the gender wage gap in China.

Second, in Japan, the gender wage gap has narrowed over the long term. The endowment components significantly contribute to a reduction in the wage gap. However, it can be interpreted that such a tendency is caused by the influence of the change in the endowment of women themselves, rather than the change in the gender difference in endowment. Additionally, after 2000, the gender difference in factor price also contributed to a reduction in the gender wage gap. The change was brought about by the change in the gender difference in the factor prices; but it became smaller in the recent period. The results indicate that

the improvement in the environment for female employment thus far has contributed to reducing the gender difference in endowment (e.g., tenure years and gender occupational segregation), and then contributed to reducing the gender difference in factor price (e.g., the returns to education).

The results indicated that although the Chinese and Japanese governments enforced equal employment policies and maternity leave regulations to reduce the gender gap in the labor market, a gender gap still exists in both China and Japan. For example, the results in Table 14.4 indicate that occupational segregation and motherhood penalties are observed in China. It should be noted that these disadvantages for women in the workplace may be caused by self-selection behavior (e.g., women's voluntary choice to become part-time employees or occupations that can allow them to adjust their working hours for childcare) and discrimination against women in the workplace. As the Japanese experience has provided evidence that equal employment opportunity policies and family-friendly policies have contributed to the reduction of the gender wage gap over the long term, the Chinese government could learn from Japanese experiences and promote the establishment of a family-friendly working environment for married women. In particular, China has experienced population aging (Ma, 2021b) and to deal with the problem of decreased labor force, has been promoting female labor force participation. Japan, which is the country with the highest proportion of the older population worldwide, faces a similar problem.

To address the problem of discrimination against women in the workplace, the enforcement of equal employment opportunity policies, establishing a friendly working environment for married women, and supporting the career development of women in the motherhood period are important issues for both the Chinese and Japanese governments.

The self-selection behavior of married women may be caused by discrimination in the workplace; therefore, dealing with the issue of discrimination could help dealing with the self-selection issue. In this sense, combating the discrimination problem is important. Moreover, self-selection may be related to the attitudes on gender role division such as "men for work, and women for family." In particular, Confucianism has had a greater influence in both China and Japan, which enhances gender role attitudes in both countries. However, the gender role attitudes also may change with an increase of female labor force participation

and the reduction of the gender wage gap in labor market. Therefore, the enforcement of equal employment opportunity policies and promotion of female employment have become important issues for both the Chinese and Japanese governments, which may reduce the gender gap in both the labor market and households from a long-term perspective.

Notes

1. However, companies with 100 or less employees are obliged to make efforts.
2. Using the electronic academic literature databases of EconLit and Web of Science, as well as the websites of leading academic publishers for English language literature and the Chinese National Knowledge Infrastructure (CNKI) database, which is the largest academic literature database in China for Chinese language literature, Iwasaki and Ma (2020) first searched for relevant studies published from 1990 to the first half of 2020. In these databases and websites, they carried out an AND search for article titles using "*China*" and "*wage*" as keywords and then obtained 212 English and 163 Chinese papers. Next, they closely examined the contents of these 375 studies and selected those that examined the gender dummy variable in the wage function. They selected 90 and 111 studies in English and Chinese, respectively, to conduct the meta-analysis. For detailed meta-analysis results and literature list, please refer to Iwasaki and Ma (2020).
3. The partial correlation coefficient in meta-analysis is calculated as

$$r_k = \frac{t_k}{\sqrt{t_k^2 + df_k}}, \quad k = 1, 2, \ldots, K.$$

   T_k and df_k denote the t value and degree of freedom of the *kth* estimate, respectively. The standard error of r_k is given by $\sqrt{\left(1 - r_k^2\right)/df_k}$. The t value is one of the female dummy variables and indicates the significance of the gender wage gap in estimations.
4. The constant is omitted for descriptive convenience.
5. General workers also include non-regular employees.
6. The gender wage gap index can also be used as a measure of the difference in regular salaries. Here, to compare the disparity that reflects the difference in overtime work and bonuses, the hourly wage was used, which was obtained by dividing the monthly salary including overtime pay and bonus by the total monthly working hours.

7. Monthly salary, including overtime pay, are called "salary paid regularly" in the Basic Survey on Wage Structure. We can also obtain information on the annual bonuses from the survey. We added the monthly bonus which is calculated as "the annual bonus was divided by 12" to the monthly salary. For the total monthly working hours, "non-scheduled working hours" were added to "scheduled working hours."

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