

Gender Discrimination in the Chinese Hiring Process

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Abstract

In 2019, nine Chinese Ministries adopted a notice that prevents employers from asking about a candidate's marital and fertility status. The goal of this notice was to prevent gender discrimination in the hiring process and thus promote gender equality in the labor market. However, this notice may lead to unintended consequences. When firms face increased uncertainty surrounding a female candidate's marital and fertility status, they may choose to discriminate against the group as a whole through hiring fewer female employees. We adopt a "DID-like" approach to estimate this notice's pure effect on women's employment outcomes and find that this notice has little effect on the probability of employment for young women but increases that for older women by 6.1 percentage points.

I Introduction

Gender discrimination in the workplace is still prevalent in China today. Two common forms of gender discrimination include fewer interview and job offers as well as lower wages for female candidates. Although the gender wage gap in China has historically been smaller relative to that in developed countries, there is evidence that this gap has increased dramatically over the past two decades, reaching levels similar to those seen in developed countries. [Iwasaki and Ma \(2020\)](#) According to a report released by the World Economic Forum, "China's gender parity ranking in 2017 fell for the ninth consecutive

year, leaving China in 100th place out of the 144 countries surveyed (in 2008 China had ranked 57th)". [““Only Men Need Apply”: Gender Discrimination in Job Advertisements in China” \(2018\)](#) Though the gap and its expansion are likely closely related to the rapid development of China’s private sector and the state’s retreat from its ideological stance on gender equality due to the increased influence of Confucian patriarchal values, the fact that current discrimination laws are not strictly enforced is likely also impactful. [Iwasaki and Ma 2020](#); [L. Zhang and Dong 2008](#) Luckily, much progress is being made in this area. In 2019, the Chinese government was drafting its first Civil Code, and, on February 21, 2019, the Ministry of Human Resources and Social Security posted a notice concerning the status of current gender discrimination laws. [of Human Resources, of Education Ministry of Justice Health Commission SASAC, and of Trade Unions All-China Women’s Federation Supreme People’s Court \(2019\)](#) The notice reiterated the government’s current laws by forbidding employers from (i) asking about a female candidate’s marital or fertility status during the hiring process, (ii) restricting births as an employment condition, or (iii) asking a female candidate to take a pregnancy test as a hiring condition, among other actions. [Ornstein and Tucker \(2019\)](#) The notice also emphasized that enforcement would be strict from that day forward. [of Human Resources et al. \(2019\)](#)

The 2019 Chinese government notice indicated that there would be strict enforcement of gender discrimination laws for the first time. [of Human Resources et al. \(2019\)](#) This was part of a larger effort to curb gender discrimination in the workplace, specifically during the hiring process. However, we worry that this notice could potentially have the opposite effect of what was intended. Employers may instead react to the notice by deciding to hire

fewer women, since the marital and fertility status of all female candidates will now be unknown. Thus, we aim to examine whether or not this policy had its intended positive effect by analyzing changes in the gap between young men’s and women’s employment status over the relevant time period. We would like to see if the gap, and thus gender discrimination in the workplace, has decreased as intended, or if it has instead increased as a result of introduced uncertainty surrounding a female candidate’s marital and fertility status. The paper will also control for a set of individual characteristics in its analysis.

II Related Work

The marital and fertility status of female candidates largely contribute to the gender gap for employment and wages found in the literature. Taking this fact as given, we will concentrate on the effect to the gender employment gap of these factors remaining unknown to employers. Since the notice was only issued recently, there is little to no formal research on the notice’s effects. As a result, we take influence from policy evaluation research on related topics.

One form of workplace gender discrimination commonly studied in the literature is fewer interview and job offers for female candidates. An experiment involving fictitious resumes for recent college graduates in China found that, among otherwise-identical female and male applicants, female applicants were 7.6% less likely to receive a callback than male applicants. [J. Zhang, Jin, Li, and Wang \(2021\)](#) Another form commonly studied is wage discrimination. Through China’s transition period, the gender wage gap was 9.2 percent, with rural regions and privately owned enterprises (POEs) having significantly

more wage discrimination against women, according to a recent meta-analysis. [Iwasaki and Ma \(2020\)](#) Firm-level analysis also finds a significant negative association between wages and the share of female workers in a firm’s labor force and similarly concludes that the gender wage gap is smaller than the productivity gap in state owned enterprises (SOEs), while the converse is true in POEs. [L. Zhang and Dong \(2008\)](#) Especially when comparing young women and women with lower education to their otherwise-identical male counterparts, the situation has especially deteriorated since China’s transition period. [Gustafsson and Li \(2000\)](#) These studies indicate key populations that we should differentiate between and pay special attention to in our analysis.

For our structure and methods, we closely follow the works of [Lee \(2012\)](#) and [Doleac and Hansen \(2020\)](#). [Lee \(2012\)](#) examines the impact of the one-child policy on gender-based educational disparities in China. The paper achieved this through using individual-level data to analyze changes in the gap between boys’ and girls’ educational opportunities occurring in the time periods before and after the policy’s implementation. [Doleac and Hansen \(2020\)](#) similarly used individual-level data and exploited variation in the adoption and timing of state and local “Ban the Box” policies for their analysis. This paper aimed to examine the effects of “Ban the Box” policies on changes in employment for young, low-skilled black and Hispanic men in the United States. These “Ban the Box” policies prevented employers from asking about job applicants’ criminal records until late in the hiring process. [Doleac and Hansen \(2020\)](#) suspected and confirmed that employers, when faced with greater uncertainty concerning a young, low-skilled black or Hispanic man’s criminal records, decide to pursue their candidacy significantly less due to this introduced

uncertainty. This finding motivated our interest in pursuing the potential unintended consequences of China’s 2019 government notice on gender discrimination laws. Both papers additionally influenced our decision to use individual-level data and to analyze changes in the gender employment gap that occurred in the time periods before and after the notice’s implementation. Further details concerning our data and empirical strategy follow.

III Data and Methods

To investigate our research question, we will take data from the China Family Panel Studies (CFPS), provided by the Institute of Social Science Survey (ISSS) of Peking University. The survey is a nationally representative, biannual longitudinal survey of Chinese families. Each year, approximately 30,000 individuals participate in the survey and the response rate is approximately 70%. This data set includes useful individual characteristics such as gender, age, region of residence, level of education attained, and current employment status.

We first briefly describe our variables. The variable “policy” is our policy dummy variable. It indicates whether the observation was recorded before or after the release of the government notice. Next, we code someone as employed (variable “employ1”) if they answer “yes” to the following question: “Did you work for at least one hour last week?” This was the same definition of employment as was used by [Doleac and Hansen \(2020\)](#). We believe that this is the most reliable available measure of employment for our sample population. This is due to the fact that temporary, seasonal, and informal jobs are com-

mon within our sample population. The presence of agricultural workers in our sample especially skew other measures of employment recorded in the survey. Then, we consider four levels of educational attainment: no Bachelor’s degree, Bachelor’s degree, Master’s degree, and PhD degree. We did not distinguish a respondent’s high school graduation status as a level of educational attainment because there was no significant difference in employment between those two populations in China. Next, the “hukou” variable represents whether the respondent comes from a rural or an urban area (0: Rural, 1: Urban). Then, the “region” variable provides the respondent’s region of residence (1: Shanghai, 2: Liaoning, 3: Henan, 4: Gansu, 5: Guangdong, 6: Other Provinces). Though many regions were grouped into the “Other Provinces” category, this was likely due to the homogeneity of relevant characteristics for those regions, so we do not believe this will limit our analysis. Finally, the “mstatus” variable represents the respondent’s marital status (0: Not Married, 1: Married). We intended to include a respondent’s industry of employment or job as individual characteristics or as groups for analysis, but very low response rates and unreliable recording for these variables led us to decide against using them.

We restrict our sample to those who are eligible to participate in the Chinese labor force (those aged between 16 and 64 years of age). From this group and for the years 2016, 2018, and 2020, we construct a pooled, cross-sectional data set due to the high degree of consistency in a person’s employment status over the relatively short period of time that we observe. To motivate our choice of years, the three-child policy was enacted on May 31st, 2021. In order to avoid complications surrounding this, all of our data was

taken from the time period of the two-child policy. The two-child policy was enacted on October 29, 2015, so we take data from 2016, 2018, and 2020 to rule out the potential effects of the change in child restriction policies. Table 1 provides relevant summary statistics for our sample population. The average age of our sample population is 33 and the distribution of male and female participation is almost equal. The majority of participants appear to live in more rural areas, have a Bachelor’s degree or less, and are married. The employment of our sample conforms to expectations, further affirming our decision to use this definition of employment.

Table 1: Summary Statistics

Statistic	N	Mean	St. Dev.	Min	Max
policy	16,749	0.142	0.349	0	1
employ1	16,749	0.780	0.414	0	1
region	16,749	4.749	1.534	1	6
hukou	16,749	0.228	0.420	0	1
age	16,749	33.818	9.852	16	64
gender	16,749	0.496	0.500	0	1
education	16,749	0.124	0.361	0	3
mstatus	16,749	0.748	0.434	0	1

To capture the notice’s effect, we make the critical assumption that, before 2019, the employer asked and knew a female candidate’s marital and fertility status as well as how many children under 16 years of age that they had. Additionally, we assume that, after 2019, employers heed the government notice and do not ask or know these conditions. For our model specification, we adopt a “DID-like” approach which takes the following form:

$$employ1 = \alpha_{it} + \beta_1' * X_{it} + \beta_2 * policy + \beta_3 * gender + \beta_4 * gender * policy$$

where X_{it} is a set of control variables, and the coefficient of the interaction term between gender and policy, β_4 , captures the pure policy effect.

We believe this policy might have heterogeneous effects on different age, education, and rural-urban area classification groups. Therefore, not only did we complete a regression of our full-model specification on our entire sample population but also individually on these groups. For age groups, we separate young people (those under 35 years of age) from older people (those above 35 years of age), regressing the two groups separately and comparing their results. For education groups, we also conduct separate regressions for those with lower levels of education (those without a Bachelor's degree) and those with higher levels of education (those with a Bachelor's degree or more) to see whether their results differ. Finally, we consider rural-urban area classification groups by checking to see whether the government notice had a significantly different effect on Guangdong province, one of the most developed provinces in China, than it did on Gansu province, a much less developed province in China.

IV Results

In Table 2 and Table 3, we compare differences in the notice's effect between young people (those under 35 years of age) and older people (those above 35 years of age). In our richest specification of Table 2 (Column 5), the coefficient of the interaction variable for young women and policy is insignificant, meaning that the notice had little effect on the employment status of young women. In our richest specification of Table 3 (Column 5), however, the coefficient of the interaction variable for older people was 0.061 and signifi-

Table 2: Regression with Young People

	<i>Dependent variable:</i>				
	employ1				
	(1)	(2)	(3)	(4)	(5)
gender	−0.236*** (0.009)	−0.237*** (0.009)	−0.237*** (0.009)	−0.237*** (0.009)	−0.219*** (0.009)
policy	−0.020 (0.016)	−0.015 (0.016)	−0.011 (0.016)	−0.016 (0.016)	−0.026* (0.016)
interaction	0.007 (0.022)	0.005 (0.022)	0.006 (0.022)	0.007 (0.022)	0.011 (0.022)
age		0.011*** (0.001)	0.010*** (0.001)	0.010*** (0.001)	0.016*** (0.001)
hukou			0.054*** (0.010)	0.034*** (0.011)	0.029*** (0.011)
region			0.004 (0.003)	0.004 (0.003)	0.003 (0.003)
education				0.060*** (0.011)	0.043*** (0.011)
mstatus					−0.107*** (0.011)
Constant	0.873*** (0.007)	0.588*** (0.026)	0.572*** (0.029)	0.572*** (0.029)	0.461*** (0.031)
Observations	9,729	9,729	9,729	9,729	9,729
R ²	0.076	0.088	0.091	0.093	0.102
Adjusted R ²	0.075	0.088	0.090	0.093	0.102

Note:

*p<0.1; **p<0.05; ***p<0.01

cant at the 5% level, implying that the policy has made older women approximately 6.1% more likely to be employed. We interpret the increase in probability of employing older women as a reduction in the uncertainty a firm faces in terms of marital and fertility status compared to that associated with younger women. The positive, while insignificant, coefficient of the interaction term for young female employees, rather than a negative

Table 3: Regression with Old People

	<i>Dependent variable:</i>				
	employ1				
	(1)	(2)	(3)	(4)	(5)
gender	−0.159*** (0.009)	−0.158*** (0.009)	−0.158*** (0.009)	−0.157*** (0.009)	−0.159*** (0.009)
policy	−0.061*** (0.023)	−0.083*** (0.022)	−0.084*** (0.022)	−0.086*** (0.022)	−0.086*** (0.022)
interaction	0.057* (0.030)	0.060** (0.030)	0.059** (0.030)	0.058* (0.030)	0.061** (0.030)
age		−0.008*** (0.001)	−0.008*** (0.001)	−0.008*** (0.001)	−0.008*** (0.001)
hukou			−0.031*** (0.011)	−0.041*** (0.011)	−0.041*** (0.011)
region			−0.003 (0.003)	−0.003 (0.003)	−0.003 (0.003)
education				0.056*** (0.019)	0.055*** (0.019)
mstatus					0.055*** (0.016)
Constant	0.899*** (0.007)	1.248*** (0.028)	1.279*** (0.031)	1.269*** (0.031)	1.215*** (0.035)
Observations	7,023	7,023	7,023	7,023	7,023
R ²	0.046	0.069	0.070	0.071	0.073
Adjusted R ²	0.046	0.068	0.069	0.070	0.072

Note:

*p<0.1; **p<0.05; ***p<0.01

coefficient, could be explained by the rapid expansion of the Chinese economy and the increase in the total Chinese employment rate between 2016 and 2019.

Other variables also enter the regression conforming to our intuition. For both young and older women, education has a positive effect on their probability of being employed. For

Table 4: Comparison between Low and High Education Group among Young People

	<i>Dependent variable:</i>	
	employ1	
	(1)	(2)
gender	−0.239*** (0.010)	−0.100*** (0.022)
policy	−0.033* (0.018)	−0.018 (0.033)
interaction	0.027 (0.025)	−0.028 (0.046)
age	0.016*** (0.001)	0.021*** (0.004)
hukou	0.026** (0.013)	0.006 (0.020)
region	0.005 (0.003)	−0.003 (0.006)
education		−0.043 (0.031)
mstatus	−0.117*** (0.012)	−0.053** (0.025)
Constant	0.472*** (0.033)	0.400*** (0.101)
Observations	8,192	1,537
R ²	0.111	0.048
Adjusted R ²	0.110	0.043

Note:

*p<0.1; **p<0.05; ***p<0.01

column (1): low education; column(2): high education

young women, their age also has a positive effect while their marital status has a negative effect. This is likely due to the fact that, for young women, being married increases the likelihood of giving birth within the next few years, so they are more likely to be engaged in child-rearing as opposed to employment. Conversely, getting married increases the

Table 5: Comparison between Low and High Education Group Among Old People

	<i>Dependent variable:</i>	
	employ1	
	(1)	(2)
gender	−0.162*** (0.010)	−0.105*** (0.035)
policy	−0.091*** (0.023)	−0.010 (0.070)
interaction	0.064** (0.031)	0.060 (0.089)
age	−0.008*** (0.001)	−0.004 (0.005)
hukou	−0.046*** (0.011)	0.084* (0.051)
region	−0.002 (0.003)	−0.013* (0.008)
education		−0.007 (0.054)
mstatus	0.058*** (0.016)	−0.003 (0.058)
Constant	1.214*** (0.036)	1.073*** (0.193)
Observations	6,659	364
R ²	0.073	0.051
Adjusted R ²	0.072	0.030

Note:

*p<0.1; **p<0.05; ***p<0.01

column (1): low education; column(2): high education

probability of employment for older women. This is likely due to marriage indicating increased life stability for older women. Additionally, having an urban “hukou” status increases one’s probability of getting employed for young people but decreases the probability for older people. This is likely due to the fact that urban areas require a large,

Table 6: Comparison between Young and Old People in Gansu

	<i>Dependent variable:</i>		
	employ1		
	(1)	(2)	(3)
gender	−0.207*** (0.024)	−0.148*** (0.021)	−0.183*** (0.016)
policy	−0.069* (0.036)	−0.077 (0.048)	−0.081*** (0.028)
interaction	0.039 (0.049)	−0.006 (0.067)	0.043 (0.039)
age	0.019*** (0.003)	−0.003** (0.002)	0.046*** (0.005)
agesq			−0.001*** (0.0001)
hukou	0.015 (0.030)	−0.110*** (0.032)	−0.029 (0.022)
education	0.038 (0.029)	0.031 (0.053)	0.046* (0.024)
mstatus	−0.110*** (0.027)	0.011 (0.037)	−0.088*** (0.021)
Constant	0.435*** (0.069)	1.087*** (0.077)	0.090 (0.087)
Observations	1,539	1,027	2,566
R ²	0.115	0.070	0.116
Adjusted R ²	0.111	0.063	0.114

Note:

*p<0.1; **p<0.05; ***p<0.01

(1): young people; (2): old people (3): all people

young labor force.

In Table 4, a comparison has been made between potential employees that received a low level of education (those without Bachelor's degree) and those that received a high

Table 7: Comparison between Young and Old People in Guangdong

	<i>Dependent variable:</i>		
	employ1		
	(1)	(2)	(3)
gender	−0.188*** (0.030)	−0.179*** (0.033)	−0.188*** (0.022)
policy	0.065 (0.046)	−0.111* (0.067)	0.008 (0.038)
interaction	−0.099 (0.067)	0.140 (0.095)	−0.019 (0.055)
age	0.017*** (0.004)	−0.010*** (0.002)	0.048*** (0.007)
agesq			−0.001*** (0.0001)
hukou	0.074** (0.031)	−0.038 (0.036)	0.018 (0.024)
education	0.073* (0.039)	−0.049 (0.072)	0.053 (0.033)
mstatus	−0.164*** (0.034)	0.017 (0.060)	−0.128*** (0.028)
Constant	0.466*** (0.089)	1.315*** (0.110)	0.090 (0.113)
Observations	972	647	1,619
R ²	0.100	0.099	0.092
Adjusted R ²	0.093	0.089	0.088

Note:

*p<0.1; **p<0.05; ***p<0.01

(1): young people; (2): old people (3): all people

level of education (those with Bachelor's degree or more) among young people. Both coefficients of the interaction variables are insignificant (though the signs are different), implying that the policy has little effect on employment status of young woman regardless of their education attainment.

In Table 5, we compare the notice’s effects between potential employees that received a low level of education (those without Bachelor’s degree) and those that received a high level of education (those with Bachelor’s degree or more) among older people. For those with a low level education, the coefficient of the interaction variable is significant, implying that the policy makes less educated women 6.4% more likely to be employed. This result suggests that, among old people, less educated women are less discriminated against than highly educated women. This is probably due to the fact that low-skill occupations put less weight on human capital accumulation, which is potentially lower for women who give birth due to their time spent outside of the labor market while child-rearing or focusing on their family.

In Table 6 and in Table 7, we run regressions using data for respondents from Gansu province, one of the most under-developed provinces in China, and Guangdong, one of the most developed provinces in China. For all regressions, the coefficients of the interaction variable are not significant. We are thus inclined to believe that the government notice has noticeably different effects on neither the most developed nor most under-developed regions but rather on regions between these two extremes. However, this hypothesis is beyond the scope of this paper and we leave this to future work.

V Conclusion

The 2019 Chinese government notice strove to improve the enforcement of its current gender discrimination laws. Its intended effect was to reduce discrimination that women

face in the hiring process. We suspected that the notice could have the opposite effect, effectively reducing female employment due to the introduction of uncertainty surrounding a female candidate’s marital and fertility status. We conducted a “DID-like” analysis using individual-level data from the CFPS in order to examine the notice’s potential effect. Our results indicate that the notice likely did not have a significant impact on female employment over the relevant time period. The notice was associated with a statistically significant impact on the employment of older women, with a 6.1% increase in the probability of employment over the relevant time period. Level of educational attainment and the rural-urban area classification were not associated with a heterogeneous effect to employment during the time period of the notice’s announcement. It appears that the government notice did not cause an improvement in women’s employment nor a deterioration of it. Future research will have the opportunity to further investigate the impact of the notice and to investigate the identification issue, an aspect that our data could not address.

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