Maternity Leave Extensions and Gender Gaps: Evidence from an Online Job Platform

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Motivation

- The impact of maternity leave on women's labor market outcomes remains highly debated, with no clear consensus (Olivetti and Petrongolo, 2017).
- Most analyses focus on realized outcomes (e.g., labor participation, wages), which are shaped by both employer and employee behaviors
    - Hard to tell the underlying mechanisms, thus unclear policy implications
    - Offsetting responses on the two sides of the market may help explain the mixed findings
    - May understate the effect: supply-side adjustments may partly offset demand-side responses.

In this Paper …

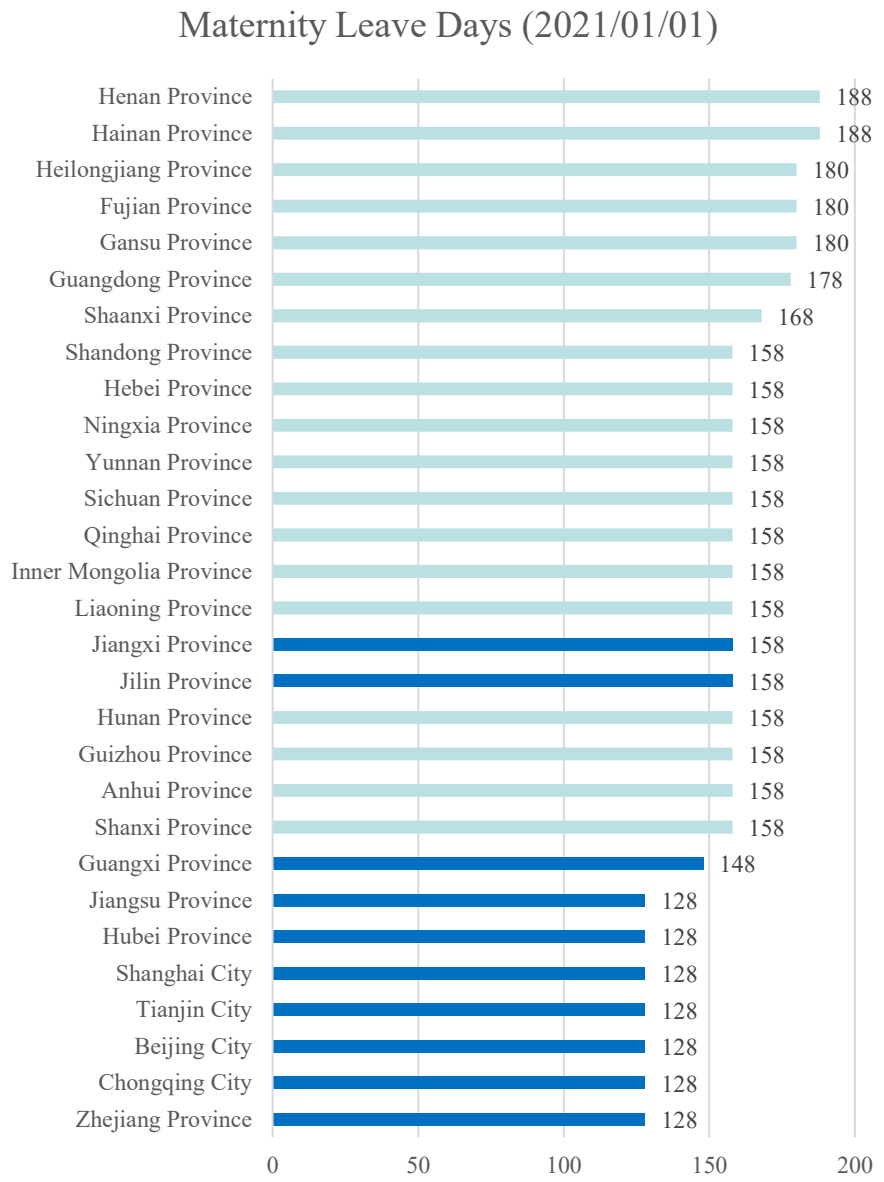
- We address this gap by:
  - Using detailed job application records in China to explore the effects of maternity leave extension
  - **Separately** examining the effects of maternity leave extensions on job seekers' application behaviors + Employers' callback decisions in the job-searching process

Preview of Findings

- **We find that in response to the maternity leave extension,**
  1) Employers are less likely **(about 17%)** to give a positive response to female applicants than to male applicants with similar characteristics after the extension.
  2) Female applicants shift toward lower-paying and time-flexible jobs, while male applicants remain unaffected.
  3) Despite shifting to lower-paying jobs and adjusting their search strategies, females must exert more effort (**20% more** job applications and **19% longer** search duration) to find a job.
- This results are for female job seekers before giving childbirth: **anticipatory child penalty!**

Policy Background: Maternity Leave Policy in China Before Extension

- 128–188 days (**98 days of national leave**, plus 30–90 days of provincial extensions)
- According to the law, employees on maternity leave are entitled to:
  - Full salary during leave, based on pre-leave average wages
  - Protection against dismissal, wage reduction, or job reassignment during leave
- Costs faced by firms during the paid leave:
  - Wages (gov't cover the firmwide average wage if firm is enrolled in maternity insurance)
  - Additional labor costs to cover the employee's absence

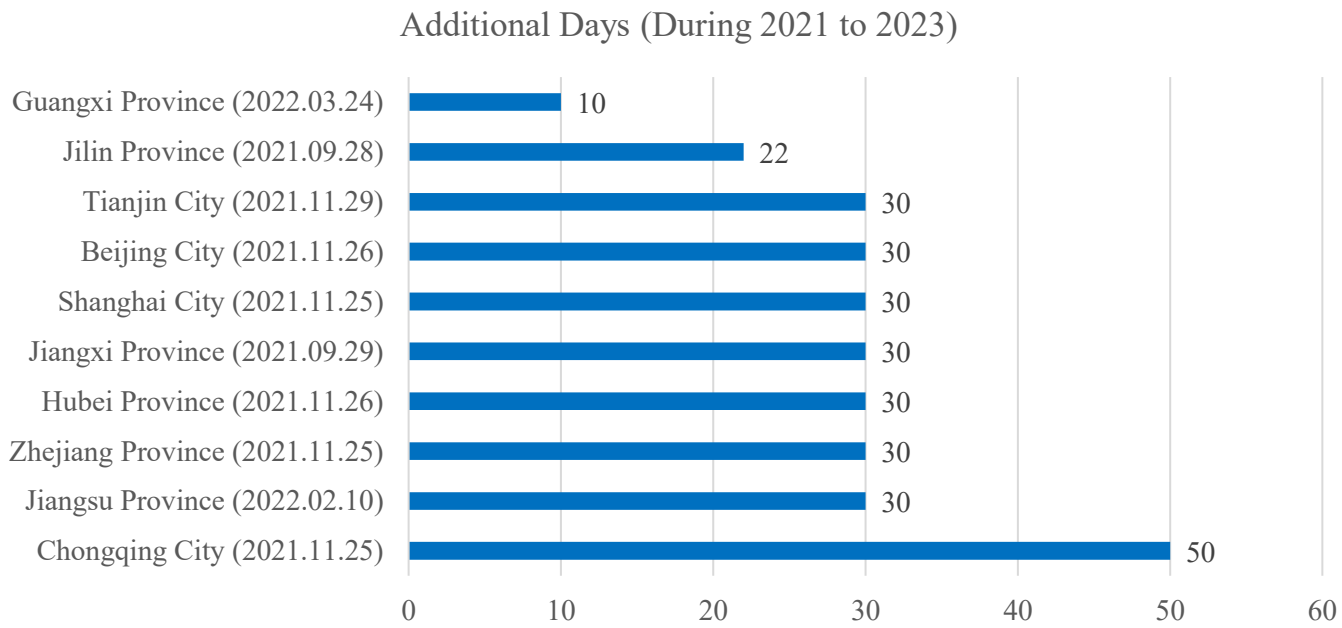


Maternity Leave Extension during 2021-2022

- 10 provinces/municipalities extended maternity leave by 10–50 days **between 2021/09 and 2022/03**
- **Extensions concentrated in regions with baseline leave ≤158 days**
  - Considering potential "always-treated" bias: focus on treated regions
- **Key measurement of policy shock**: ratio of additional extension days ($\Delta\% ML_c$)

$$\Delta\% ML_c = \Delta ML_c / ML_{c2021}$$

  - Range: 0.07-0.39; **Average: 0.22**

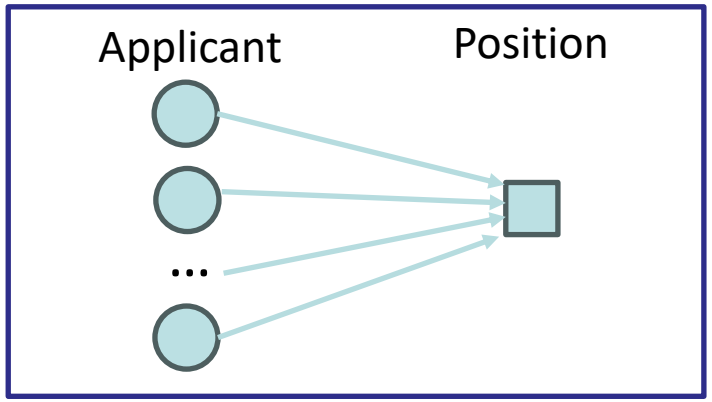


Data and Data Structure

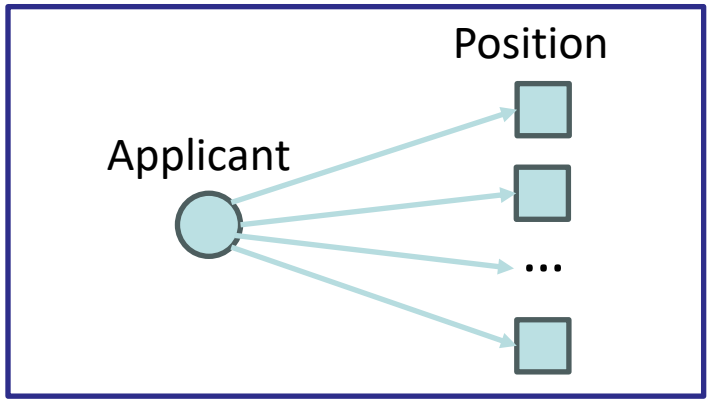
- One of the largest online job boards in China
  - **2021.01.01- 2022.12.31, daily-level**
  - Covers nearly all industries, regions with diverse economic conditions, and job seekers with varying levels of human capital
- **Structure: Applicant → Job Position → Employer Reply**
  - Applicant: application date, applicant characteristics (age, gender, education, work experience, city)
  - Job Position: city, industry, wage, requirement, benefit description (e.g., time amenity, social insurance), other job posting content…
- Employer Reply: **give a positive reply within 24 hours (Yes=1)**
  - Positive Reply: schedule an interview, have a phone call, exchange contact information, and further chat about the work
  - About 80% of applications that receive a reply finally are contacted within the first 24 hours

Data: Sampling Strategy

- Employer-side analysis:
  - 20,000 randomly selected positions for each year;
  - Obtain all application received for the position
  - 1,089,546 application records



- Applicant-side analysis:
  - 20,000 randomly selected job seekers for each year;
  - Obtain full application history this year.
  - 886,727 application records



Sample Selection and Description

- **Data Filtering:**
  - Keep applicants aged 20–40: covering the primary childbearing and job-seeking population
  - Exclude regions outside mainland China and ethnic minority autonomous areas
  - Focus on places with extension during 2021-2022

- **Summary Statistics:**
  - **Monthly wage**: avg. 10,076 RMB (1400 dollars, higher than the national average)
  - **Job characteristics**:
    - 29% with time amenities (no overtime, weekend off)
    - 66% provide social insurance ("Five Insurances + Housing Fund")
    - 30% require a high education level (≥bachelor's degree)
  - **Employer response**: avg. callback within 24h: 26%

Table 1: Summary Statistics: Employer Sample

	All (1)	Pre (2)	Post (3)
Job Characteristics:			
Wage	10075.90	9898.45	10206.20
	[5250.09]	[5180.68]	[5297.08]
With Time Amenity	0.29	0.28	0.29
	[0.45]	[0.45]	[0.45]
With Social Insurance	0.66	0.71	0.63
	[0.47]	[0.46]	[0.48]
High Education Requirement	0.30	0.33	0.28
	[0.46]	[0.47]	[0.45]
Give a positive reply ($Y = 1$):			
All Sample	0.26	0.22	0.28
	[0.44]	[0.41]	[0.45]
Female	0.26	0.22	0.28
	[0.44]	[0.41]	[0.45]
Male	0.26	0.22	0.29
	[0.44]	[0.41]	[0.45]
Number of Applications Received:			
Total Number	29.65	22.77	34.71
	[88.25]	[62.95]	[102.65]
Weekly Number	1.66	1.48	1.78
	[6.76]	[5.23]	[7.57]
Weekly Number from Female	0.83	0.73	0.89
	[4.54]	[3.48]	[5.11]
Weekly Number from Male	0.84	0.75	0.90
	[3.48]	[2.79]	[3.85]

Data Selection and Description

- **Demographics**:
  - Women: younger, higher education, less work experience
- **Characteristics of applied jobs**:
  - Women: lower wages, more time amenities
- **Search behavior**:
  - Women submit more applications; shorter search duration till the first positive reply

Table 2: Summary Statistics: Applicant Sample

		Female			Male	
	All	Pre	Post	All	Pre	Post
	(1)	(2)	(3)	(4)	(5)	(6)
Applicant Characteristics:						
Age	27.73	28.06	27.34	28.48	28.64	28.30
	[5.16]	[5.16]	[5.13]	[5.35]	[5.26]	[5.44]
High Education Level	0.57	0.59	0.56	0.47	0.49	0.44
	[0.49]	[0.49]	[0.50]	[0.50]	[0.50]	[0.50]
High Work Experience	0.62	0.65	0.59	0.69	0.70	0.68
	[0.49]	[0.48]	[0.49]	[0.46]	[0.46]	[0.47]
Characteristics of Applied Job:						
Wages	9299.63	9739.56	9007.62	11317.13	11629.00	11109.55
	[9820.94]	[6790.33]	[11386.53]	[9523.91]	[8916.48]	[9902.20]
With Time Amenity	0.33	0.31	0.34	0.27	0.25	0.29
	[0.47]	[0.46]	[0.47]	[0.45]	[0.43]	[0.45]
With Social Insurance	0.71	0.76	0.68	0.71	0.75	0.68
	[0.45]	[0.43]	[0.47]	[0.45]	[0.43]	[0.47]
Application Intensity / Duration:						
Weekly Apply ($Y = 1$)	0.13	0.14	0.13	0.13	0.14	0.13
	[0.34]	[0.35]	[0.33]	[0.34]	[0.35]	[0.33]
Weekly Application Number	0.79	0.75	0.81	0.74	0.70	0.77
	[3.66]	[3.26]	[3.93]	[3.63]	[3.43]	[3.77]
Application Number until First Positive Reply	5.87	5.66	6.09	5.79	5.77	5.80
	[7.06]	[6.82]	[7.31]	[7.97]	[8.20]	[7.73]
Days until First Positive Reply	11.51	13.54	9.48	12.60	15.67	9.81
	[31.68]	[34.51]	[28.44]	[34.23]	[38.36]	[29.72]

Employer Side: Empirical Strategy – Staggered DD

- **Changes in employers' behavior after the expansion of maternity leave:**

$$\boldsymbol{Y_{ijct} = \alpha + \beta D_{ct} \times \Delta\%ML_c \times Female_i + \delta_{c*t} + \delta_{female*t} + \delta_{female*c} + \delta_j + X_i + Workday_t + \epsilon_{ijct}}$$

  - Y_{ijct}: response from job j in city (city of employment) c to applicant i at date t.
  - D_{ct}: =1 if the policy documents have been released at date t in job city c, otherwise=0
  - $\Delta\%ML_c$: ratio of additional extension days during 2021- 2022, $\Delta ML_c / ML_{c2021}$
  - $\boldsymbol{\beta}$: change in female callback rates relative to males per 100% increase in maternity leave days
  - $\delta_{c*t}, \delta_{female*t}, \delta_{female*c}$: city-by-time (calendar year-week) fixed effects; female-by-time fixed effects; female-by-city fixed effects
  - δ_j: job fixed effects
  - X_i: age-by-education level-by-work experience level fixed effects
  - $Workday_t$: whether today and the next day are working days
  - ϵ_{ijct}: error term; clustered at the **city of employment level**

Employer Side: Enlarged Gender Gap in Positive Response Rate

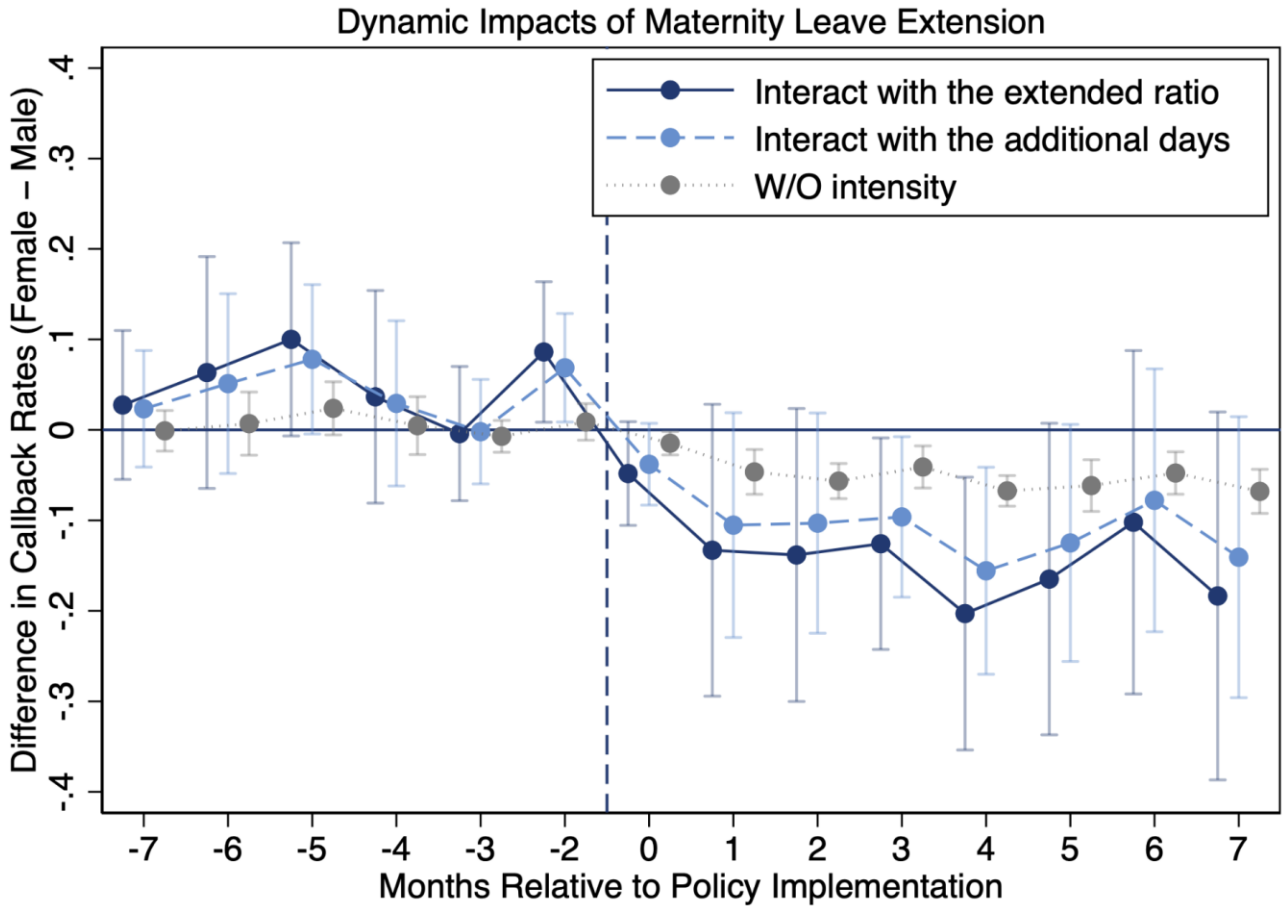
- A 10% increase in maternity leave reduces female callback rates by 1.7 p.p. relative to males.
  - Average Policy Shock (22%): 3.7 p.p. decrease, a 17% change of the female pre-policy mean (0.219)
- By gender: female callback ↓, male callback ↑
  - ~60% of widening due to female callback decline
- Neither job composition nor applicant pool changes explain the widening callback gap (Table 5).

Table 3: Effects of Maternity Leave Extension on Callback Rates

	All Applications			By Applicant Gender	
				Female	Male
	(1)	(2)	(3)	(4)	(5)
Dependent Variable: Give a Positive Reply ($Y = 1$)					
$D_{ct} \times \Delta\%\text{ML}_c \times$ Female	-0.242*	-0.172**	-0.169**		
	(0.132)	(0.080)	(0.079)		
$D_{ct} \times \Delta\%\text{ML}_c$				-0.077***	0.054***
				(0.015)	(0.009)
Female × Time FE	✓	✓	✓		
Female × Job City FE	✓	✓	✓		
Job City × Time FE	✓	✓	✓		
Job Characteristics	✓				
Job FE		✓	✓	✓	✓
Applicant Characteristics			✓	✓	✓
Workday Indicator	✓	✓	✓	✓	✓
Time FE				✓	✓
Obs.	328,758	331,275	331,219	164,552	167,396
Adjusted R^2	0.158	0.430	0.433	0.439	0.438
Pre-policy Mean	0.219	0.219	0.219	0.219	0.216

Dynamic Effect

- The gap widens markedly after the policy and persists for a long time
- Smaller initial effect, likely reflecting employers' adjustment and learning



Robust Check

- Treatment Effect Heterogeneity:
  - Sun and Abraham (2020) Estimator
- Concurrent Policy Controls:
  - Paternal and childcare leave extensions;
  - COVID-19 outbreaks
- Alternative Regression Specifications:
  - Use $\Delta \boldsymbol{ML_c}$ as measurement;
  - Lunar calendar fixed effects;
  - Include groups without extension as control
- Placebo Test:
  - Random treatment timing;
  - Sample aged more than 45
- Test Anticipation Effects:
  - "Maternity leave" Baidu searches Index
- Leave-One-Out Analysis

Heterogeneous Analyses: Highlights

- **Main Mechanism: expected leave cost vs. anticipated productivity**
  - **Productivity Channel**
    - Smaller penalty in: High-wage jobs; High-education-requirement jobs; Highly educated female applicants
  - **Leave Cost Channel**
    - Smaller penalty in: Jobs with time amenities; Provinces with wage subsidies
    - Larger penalty in: Women at peak fertility age, 26–30; Women with high fertility risk predicted by characteristics
  - **Amplifying Factors**
    - Larger penalty where replacement is difficult (proxied by higher vacancy/job seeker ratio)
    - Stronger response in private firms (weaker regulatory oversight)

Applicant Side: Increasing Gender Gap in Wages of Applied Job

- Female vs. male: at the average policy intensity (22%)
  - 5.4% wage reduction
  - 3.7 p.p. increase in the probability of applying for a job with time amenity
  - No significant change in applications to jobs offering social insurance
- Restrict to those applications receiving positive reply: stronger effect
- Women adjust job search strategy → lower wage expectation, shift to more female-friendly job

Table 5: Effects of Extension on Characteristics of Applied Job

Panel A: All Applicants			
VARIABLES	Log(Wage)	Time Amenities	Social Insurance
	(1)	(2)	(3)
$D_{ct} \times \Delta\%\text{ML}_c \times$ Female	-0.234***	0.170*	-0.050
	(0.074)	(0.089)	(0.100)
Obs.	293,221	293,222	293,222
Adjusted R^2	0.613	0.052	0.090
Pre-policy Mean	9.033	0.309	0.755

Panel B: By Applicant Gender						
	Female			Male		
VARIABLES	Log(Wage)	Time Amenities	Social Insurance	Log(Wage)	Time Amenities	Social Insurance
	(1))	(2)	(3)	(4)	(5)	(6)
$D_{ct} \times \Delta\%\text{ML}_c$	-0.126**	0.103*	-0.016	0.008	0.025	0.083
	(0.055)	(0.059)	(0.075)	(0.065)	(0.047)	(0.054)
Obs.	149,885	149,885	149,885	143,838	143,839	143,839
Adjusted R^2	0.604	0.038	0.089	0.589	0.066	0.090
Pre-policy Mean	9.033	0.309	0.755	9.197	0.252	0.754

Applicant Side: More Intensive Search

- Female vs. male: at average policy intensity (22%)
  - Little change in weekly application probability or applications per week
  - Submit about 4.4 additional application (20% of the pre-policy mean)
  - Take 0.9 more weeks (19% of the pre-policy mean) to receive the first positive reply.
- Despite lowering their wage expectations, females face longer and more intensive job searches due to employer preference shifts.

Table 7: Effects of Extension on Applicant Job Search Behavior

	Weekly Apply ($Y = 1$)		# Weekly Application		# Total Application		Search Duration	
VARIABLES	Female	Male	Female	Male	Female	Male	Female	Male
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$D_{ct} \times \Delta\%\text{ML}_c$	-0.025	-0.022	-0.376	-0.376	20.016***	8.417	3.850**	-0.889
	(0.086)	(0.084)	(0.726)	(0.726)	(6.262)	(8.281)	(1.763)	(1.489)
Obs.	67,745	68,312	68,312	68,312	5,892	6,031	2,956	3,121
Adjusted R^2	0.051	0.050	0.096	0.096	0.072	0.077	0.142	0.122
Pre-policy Mean	0.380	0.376	1.915	1.915	21.500	20.990	5.036	5.037

Contribution to the Literature

- **1. Family policies & female labor market outcomes**
  - Literature focus: final equilibrium outcomes; mixed results (e.g., Ruhm, 1998; Blau & Kahn, 2013; Fernández-Kranz & Rodríguez-Planas, 2021; Kleven et al., 2024)
  - Recent trend: employer response to leave policies (Ginja et al., 2023; Schmutte & Skira, 2023; Brenøe et al., 2024; Bapna & Funk, 2025)
  - **Our contribution:**
    - First to give direct evidence on how maternity leave extensions affect both sides:
      - Employer side: reduce the likelihood of positive callbacks to female applicants
      - Applicant side: women shift toward less competitive jobs and exhibit increased job search intensity and duration compared with men
    - Spillover Effect: maternity leave expansions can worsen hiring outcomes for women more broadly, including those who do not take leave

Contribution to the Literature

- **2. Gender discrimination in hiring** (e.g., Goldin and Rouse, 2000; Bertrand and Mullainathan, 2004; Kuhn and Shen, 2013; Mocanu, 2024), particularly discrimination related to family responsibilities (Firth, 1982; Correll et al., 2007; Petit, 2007; Becker et al., 2019; He, Li, and Han, 2023).
  - **Our evidence:**
    - Employers reduce female callbacks after leave extensions
    - Core mechanism: trade-off between **expected productivity** and **expected leave cost**
- **3. Child penalty**
  - Established findings: childbirth → persistent earnings and career penalties (e.g., Kuziemko et al., 2018; Kleven, Landais, and Søgaard, 2019; Cortés and Pan, 2020; Boelmann, Raute, and Schönberg, 2024)
  - **Our new perspective on the child penalty:**
    - Penalty on the likelihood of becoming a mother rather than actual childbirth
    - Arise before labor market entry and cannot be mitigated by individual fertility choices

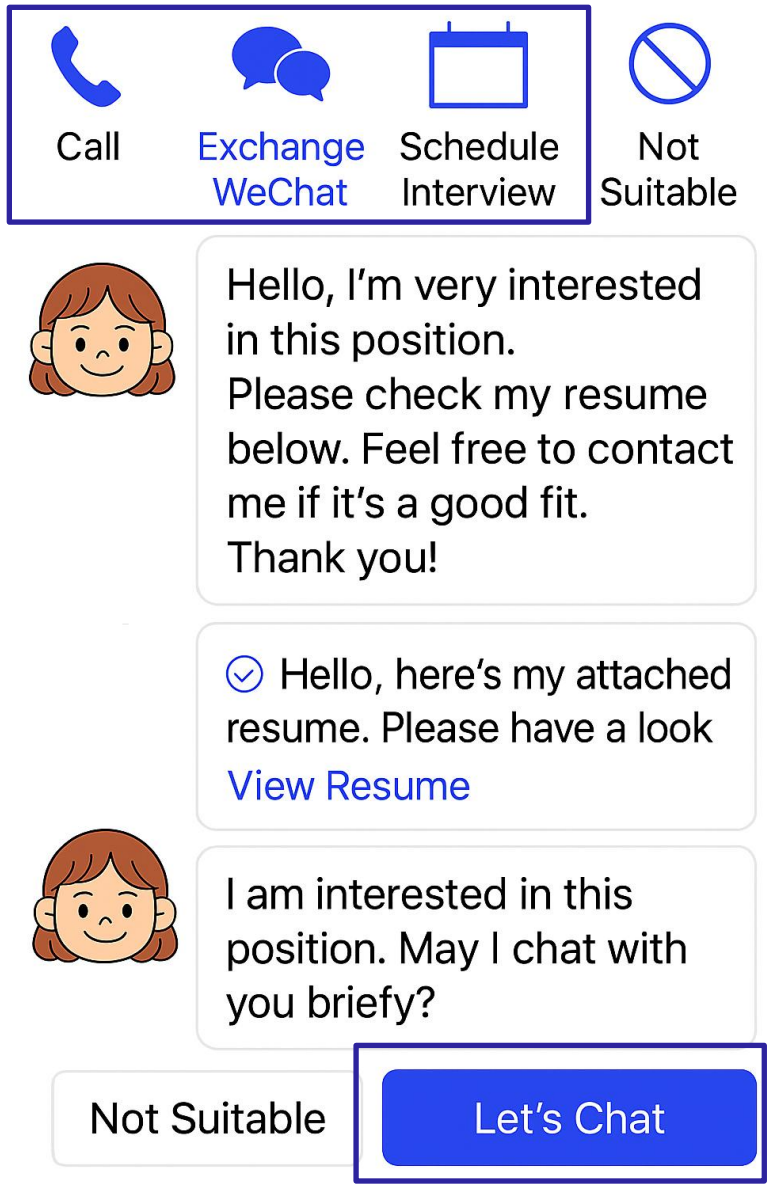
Conclusion

- Maternity leave extension → Widened gender disparities in callback rates
- Women respond by applying to lower-wage, more time-flexible jobs. Still, females face longer and more intensive job searches.
- **We provide evidence for two novel channels that maternity leave extension may exacerbate gender disparities:**
  - Anticipatory discrimination: penalty occurs before childbirth, driven by the expected leave cost
  - Behavioral adjustment: women shift toward jobs with lower expected employer burden
- **Policy implications**
  - Incorporate both employer and employee responses into policy design
  - Shift maternity leave costs from firms to public funds

Appendix

Data: Positive Reply

- What counts as a positive reply?
- If the employer chooses **any** of the following responses:
  - Makes a phone call
  - Exchanges WeChat account (a messaging app similar to WhatsApp)
  - Invites the applicant to an interview
  - Replies “Let’s chat” to the applicant’s message “I'm interested in your job posting — mind if we have a quick chat?”



- Back

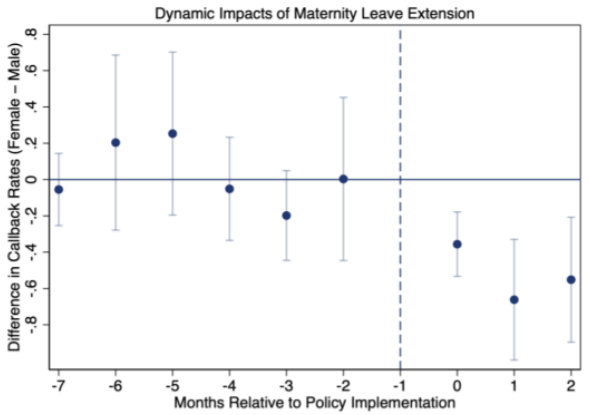
Employer Side: Empirical Strategy – Staggered DD by gender

- **Changes in employers' behavior after the expansion of maternity leave:**

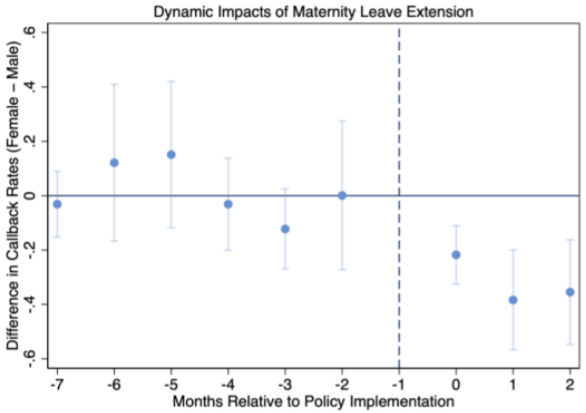
$$Y_{ijct}^{g} = \alpha^{g} + \gamma^{g} D_{ct} * \Delta\%ML_{c} + \delta_{t}^{g} + \delta_{j}^{g} + X_{i}^{g} + Workday_{t}^{g} + \epsilon_{ijct}^{g}$$

  - Y_{ijct}^{g}: Response from job j in job city c to applicant i of gender g at date t.
  - D_{ct}: =1 if the policy documents have been released at date t in job city c, otherwise=0
  - $\Delta\%ML_{c}$: Ratio of additional extension days during 2021- 2022, $\Delta PL_{c}/PL_{c2021}$.
  - γ^{g}: Change in callback rates of gender g per 100% increase in maternity leave days.
  - δ_{t}^{g}: Time (Calendar year-week) fixed effects
  - δ_{j}^{g}: Job fixed effects
  - X_{i}: Age-by-education level-by-work experience level fixed effects.
  - $Workday_{t}$: Whether today and the next day are working days.
  - ϵ_{ijct}: Error term; Clustered at the job city level.

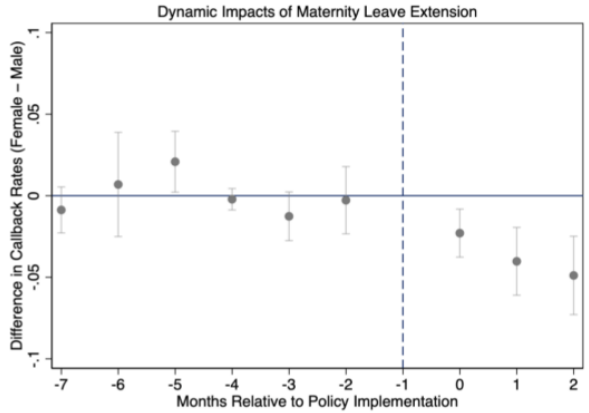
Robustness Check: Sun and Abraham (2020) Estimator



(a) Interact with the extended leave ratio



(b) Interact with the additional days



(c) W/O intensity

Figure A2: Dynamic Estimation Using the Sun and Abraham (2021) Method

Back

Robustness Check: Concurrent Policy Controls

Table A1: Robustness: Control for Concurrent Policies and COVID-19

VARIABLES	Other Leave Controls (1)	COVID Controls (2)	Post-Three Child (3)
$D_{ct} \times \Delta\%\text{ML}_c \times$ Female	-0.236***	-0.132**	-0.176**
	(0.053)	(0.061)	(0.084)
$\text{Paternal}_{ct}/100 \times$ Female	-0.088		
	(0.155)		
$\text{Childcare}_{ct}/100 \times$ Female	0.307		
	(0.190)		
# Cases (k) × Female		-0.002	
		(0.002)	
# New Infections (k) × Female		0.000	
		(0.000)	
Obs.	331,219	304,497	283,377
Adjusted R^2	0.433	0.433	0.440
Pre-policy Mean	0.219	0.219	0.240

Back

Effects of Paternal and Childcare Leave Extensions on Callback Rates

Table A2: Effects of Paternal and Childcare Leave Extensions on Callback Rates

VARIABLES	Paternal Leave Extension	Childcare Leave Extension
	(1)	(2)
$D_{ct} \times (\Delta\text{Paternal}_c/100) \times \text{Female}$	-0.022	
	(0.220)	
$D_{ct} \times (\Delta\text{Childcare}_c/100) \times \text{Female}$		0.031
		(0.076)
Obs.	107,840	507,371
Adjusted R^2	0.427	0.428
Pre-policy Mean	0.315	0.291

Notes: This table examines whether extensions in paternal leave or childcare leave have differential effects on female applicants' callback rates. Column (1) restricts the sample to provinces that extended paternity leave during 2021–2022 but did not implement maternity leave extensions. Column (2) includes provinces only have childcare leave extensions. The interaction terms capture whether gender-specific effects exist for non-maternity leave reforms. All specifications include city-by-calendar week, gender-by-calendar week, gender-by-city, and job fixed effects, as well as applicant characteristics and workday status. Standard errors clustered at the city level are reported in parentheses. $^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.1$.

Back

Robustness Check: Alternative Regression Specifications 1

Table A4: Robustness: Alternative Policy Intensity and Time Controls

VARIABLES	Use Extension Days	Use Lunar Date FE
	(1)	(2)
$D_{ct} \times (\Delta \text{ML}_c/100) \times \text{Female}$	-0.130**	
	(0.062)	
$D_{ct} \times \Delta\%\text{ML}_c \times \text{Female}$		-0.165**
		(0.079)
Obs.	331,219	331,197
Adjusted R^2	0.433	0.433
Pre-policy Mean	0.219	0.219

Back

Robustness Check: Alternative Regression Specifications 2

Table A3: Robustness: Alternative Sample Restrictions

VARIABLES	No Extension Provinces	Jobs Restriction	Age 45+ Female	Age 45+ Male
	(1)	(2)	(3)	(4)
$D_{ct} \times \Delta\%\text{ML}_c \times$ Female	-0.067**	-0.177**		
	(0.027)	(0.086)		
$D_{ct} \times \Delta\%\text{ML}_c$			0.137	-0.073
			(0.115)	(0.059)
Sample Restriction	Treated + No Extension Provinces	Jobs with >10 Applications and <30 Vacancies in Treated Prov.	45+ Female in Treated	45+ Male in Treated
Obs.	838,654	304,903	5,339	18,510
Adjusted R^2	0.431	0.422	0.531	0.462
Pre-policy Mean	0.294	0.205	0.089	0.126

Back

Robustness Check: Random Treatment Timing

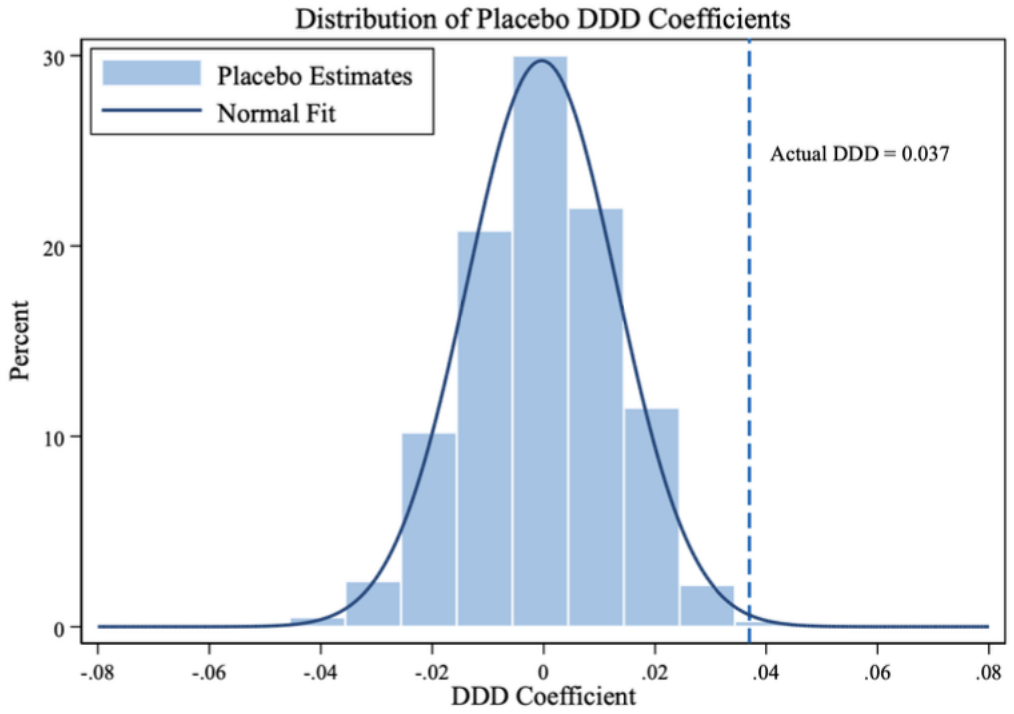


Figure A4: Placebo Test via Randomized Policy Time Simulation

Notes: This histogram shows the distribution of estimated policy effects from 1,000 placebo tests. In each simulation, a randomly selected untreated province is assigned a pseudo-treatment month, and dynamic coefficients are re-estimated.

Back

Robustness Check: Test Anticipation Effects

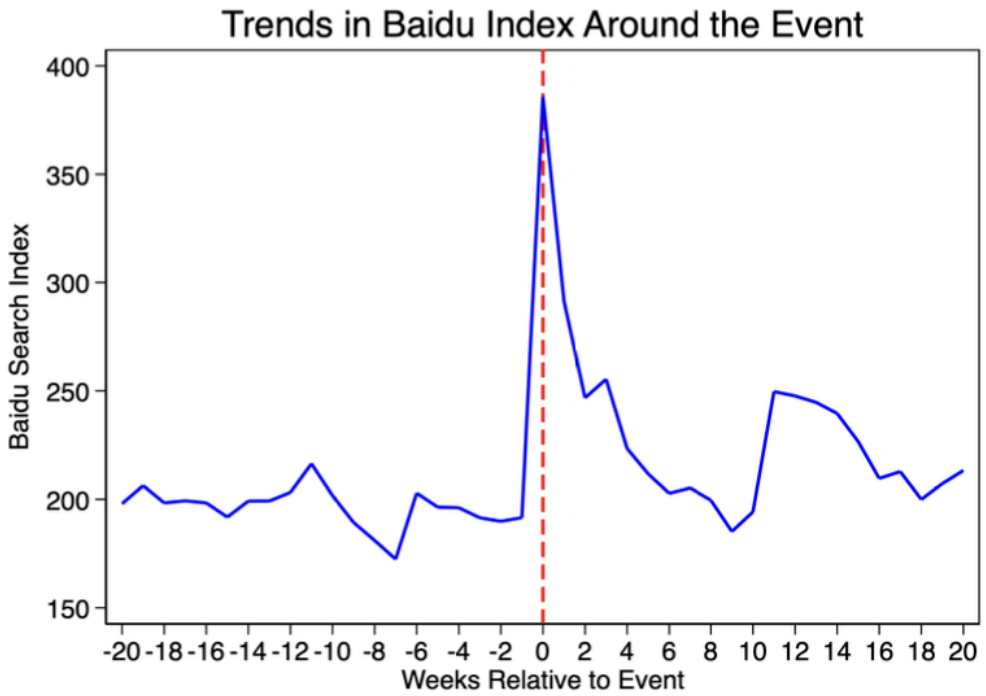


Figure A5: Baidu Search Index for "Maternity Leave" Around Policy Announcement

Notes: This figure plots the average Baidu Search Index for the term "maternity leave" across treated provinces from 20 weeks before to 20 weeks after the policy announcement. The vertical line represents the week of official policy issuance.

Back

Robustness Check: Leave-one-out Regression

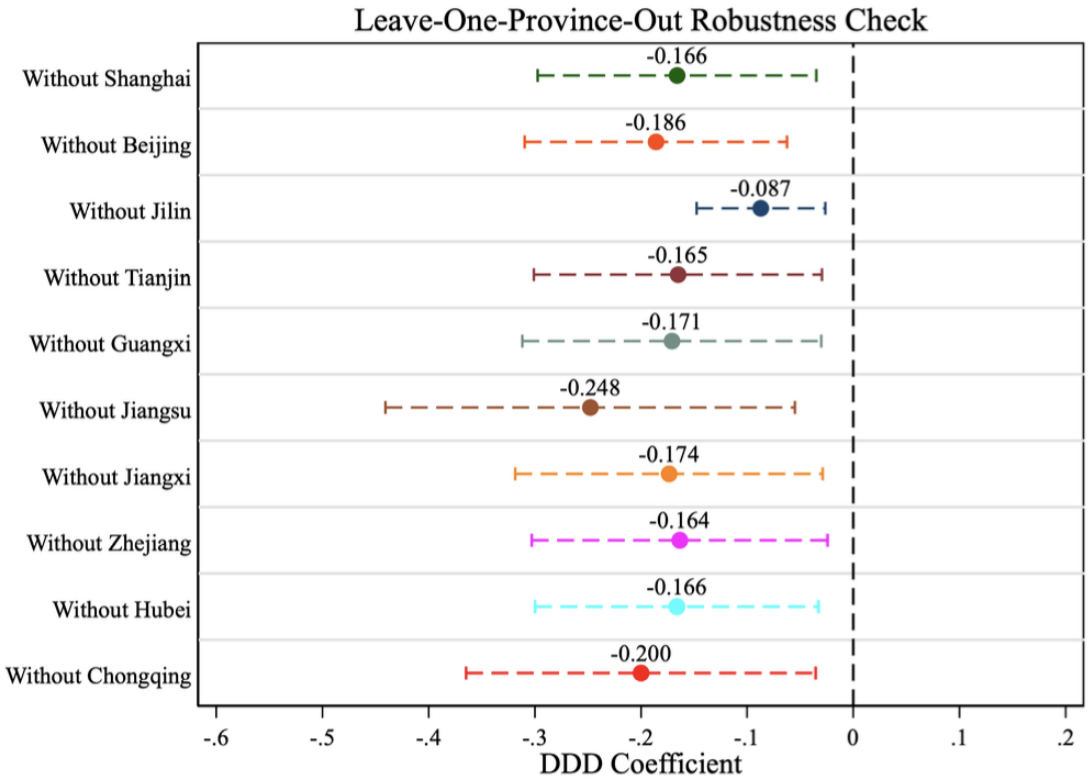
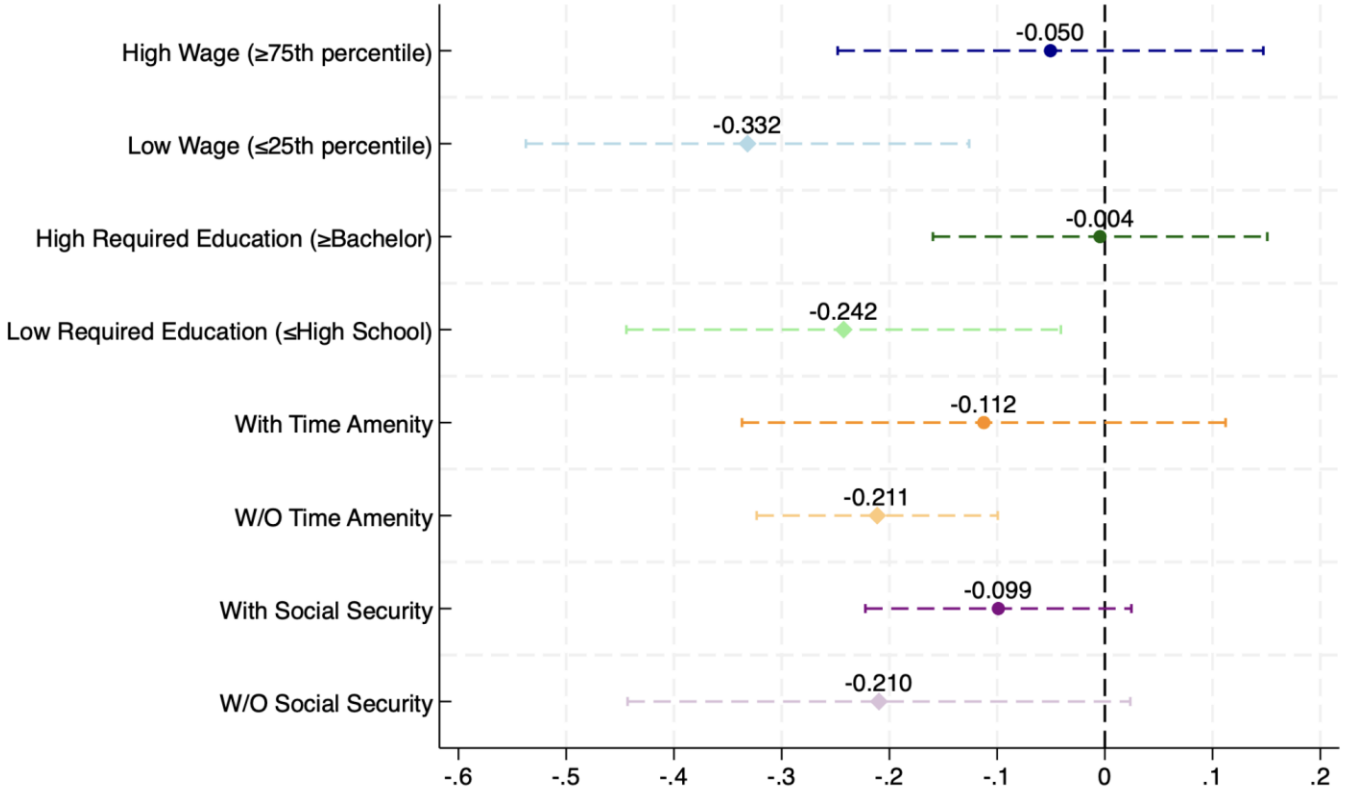


Figure A6: Leave-One-Out Robustness of Dynamic Policy Effects

Notes: This plot presents dynamic estimates where one treated province is excluded at a time. All estimates are accompanied by 90% confidence intervals. Regressions control for city-by-week, gender-by-week, gender-by-city, and job fixed effects, as well as applicant-level characteristics and workday status. Standard errors are clustered at the city level. Shaded areas represent 90% confidence intervals.

Back

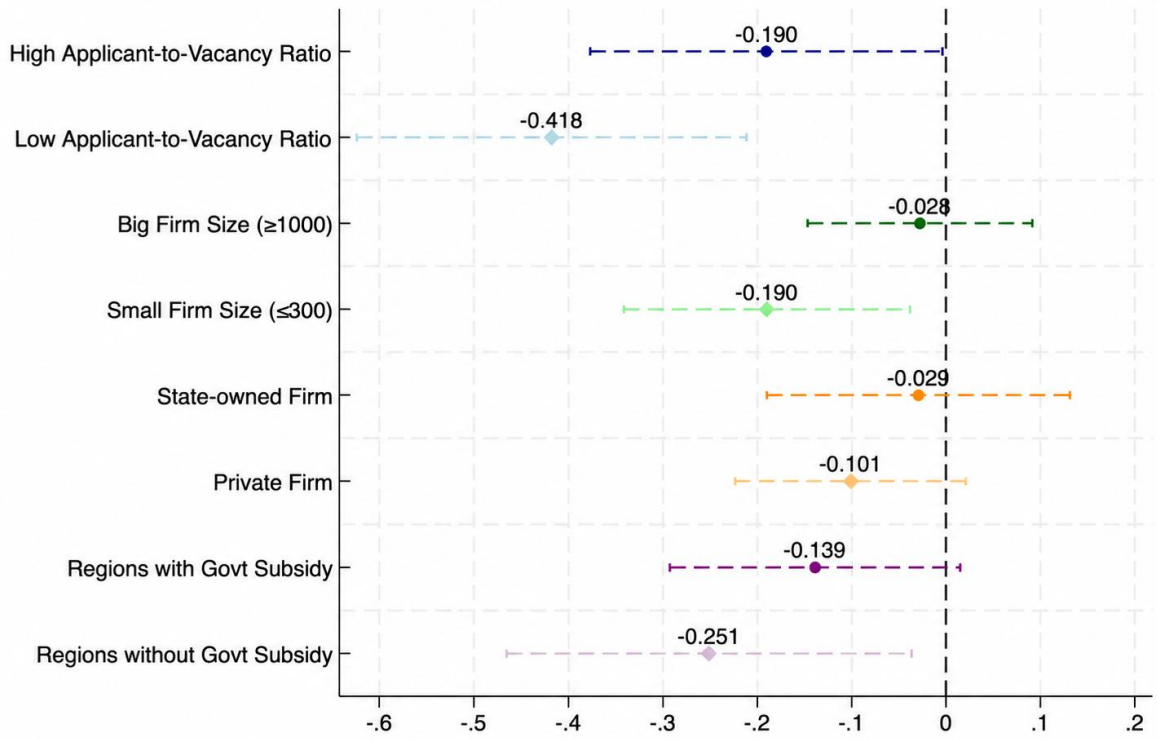
Heterogeneous Analyses: by Job Characteristic



- High-quality jobs: No significant changes
  - Higher expected productivity of skilled applicant offsets leave cost
- Time amenity (no overtime, weekend off):
  - Time flexibility→ Lower costs during leave
  - Consistent with Goldin (2014): flexible hours reduce gender inequality
- Social insurance (includes maternity insurance):
  - Higher firm formality & gov't cost-sharing

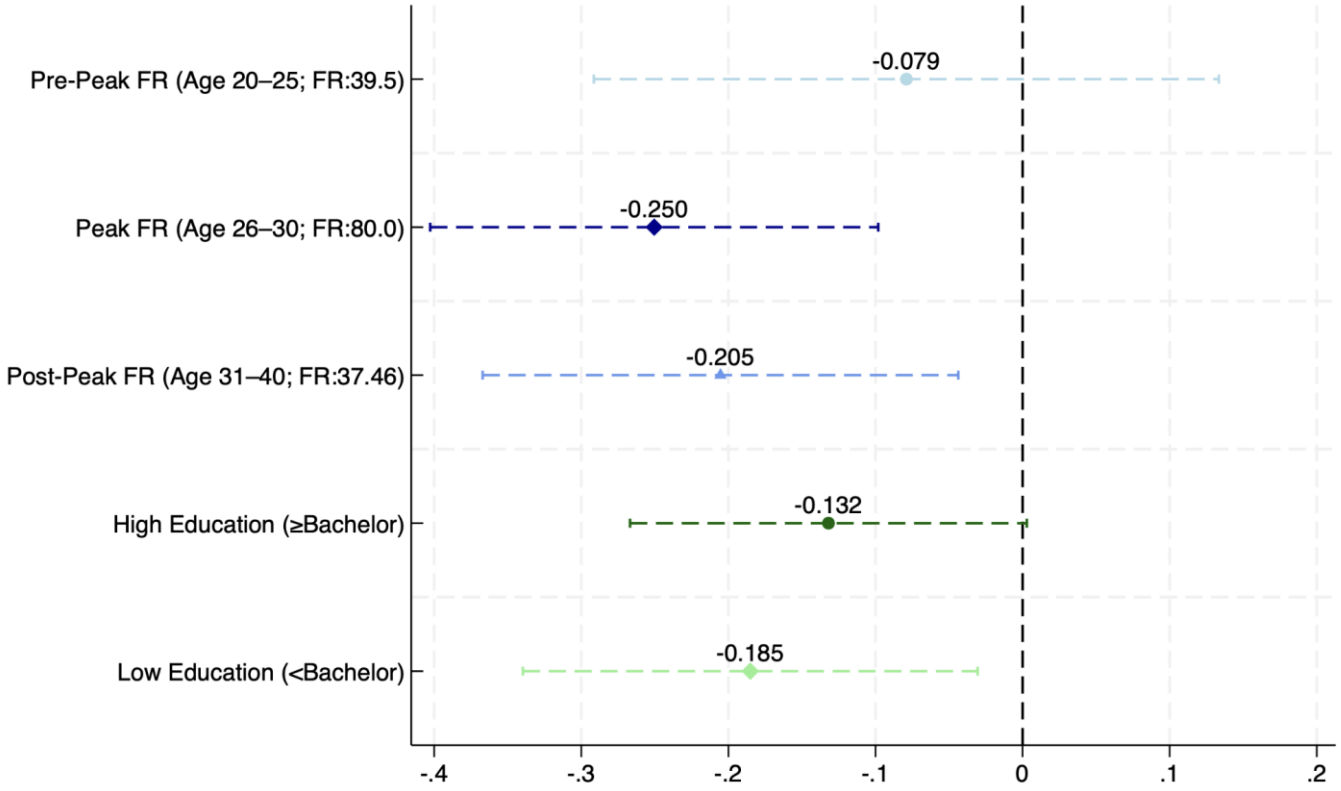
- Back

Heterogeneous Analyses: by Firm/ Industry Characteristic



- Labor Market Frictions: How easy to find an alternative worker during paid leave ? (Ginja et al., 2023)
  - Proxies: **industry applicant-to-vacancy ratio**, **firm size**
  - High-ratio industries, Large firms → → lower friction → smaller female penalty
- SOEs: less sensitive to cost, more public responsibility
- Government Subsidy for Wage Cost
  - Back

Heterogeneous Analyses: by Applicant Characteristic



- Back

- Age (20–40, 2020 Census-based groups)
  - **Peak (26–30)** → perceived higher risk of maternity leave
- Predicted Fertility Probability based on characteristics (province-edu-age cell)
  - High fertility risk → greater decline
- Education Level
  - **Higher education** → greater productivity→ smaller female penalty
  - Greater **within-gender inequality**
  - Increased risk of labor force exit for women with lower education level

Heterogeneous Analyses: by Local Government Subsidization

- Whether the local government subsidizes the wage costs for the extension
- **"Cover" group:** Shanghai, Zhejiang, and Jiangsu
- Regions without government subsidy exhibit nearly twice the increase in gender gaps compared to subsidized regions.
- Government-funded maternity leave extensions can partially mitigate discriminatory responses by reducing the perceived wage cost burden on employers

VARIABLES	Govt Cover	No Govt Cover
	(1)	(2)
$D_{ct} \times \Delta\%ML_c \times Female$	-0.139	-0.251*
	(0.090)	(0.128)
Female × Time FE	✓	✓
Female × Job City FE	✓	✓
Job City × Time FE	✓	✓
Job FE	✓	✓
Applicant Characteristics	✓	✓
Workday Indicator	✓	✓
Observations	132,942	198,192
Adjusted R^2	0.434	0.430
Pre-policy Mean	0.247	0.202

Back

Heterogeneous Analyses: Interaction with Fertility Probability

- At the average policy shock intensity (22%), a 10–percentage-point increase in the predicted fertility probability is associated with an additional 1.24–percentage-point decline in employers' callback rates.

Table A5: Heterogenous: Interaction with Fertility Probability

VARIABLES	Interaction Model (1)
$D_{ct} \times \Delta\%\text{ML}_c \times \text{FP}_i$	-0.565*
	(0.329)
$D_{ct} \times \Delta\%\text{ML}_c$	0.117
	(0.158)
Obs.	21,757
Adjusted R^2	0.473
Pre-policy Mean	0.190

Notes: This table reports estimates from an interaction specification examining whether the effect of maternity leave extensions on callback rates varies with fertility probability (FP_i). The fertility probability is constructed at the city–education–age level and represents the predicted probability of childbirth within the next three years. The regression sample includes only applications from female applicants with a bachelor's degree and less than one year of work experience. All regressions control for fertility probability, time fixed effects, job fixed effects, applicant-level characteristics, and workday status. Standard errors, clustered at the city of employment level, are reported in parentheses. $^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.1$.

Back

Employer side: Changes in Job Characteristics and Application Counts

- Alternative mechanisms of changes in callback rates?
  - 1. Job Composition change
    - Hypothesis: ↓ in female-friendly jobs (e.g., time amenities) → ↓ female callback rates
  - 2. Application Volume & Gender Mix Change
    - Hypothesis: ↑ applications per job (especially from women) → ↓ female callback rates
- Neither job composition nor applicant pool changes explain the widening callback gap

Table 4: Effects of Policy on Job Characteristics and Received Application Counts

Panel A: Job Characteristics					
VARIABLES	# Positions	Log Wage	Time Amenities	Social Insurance	Edu Req High
	(1)	(2)	(3)	(4)	(5)
$D_{ct} \times \Delta\%\text{ML}_c$	-25.096	-0.036	0.028	-0.029	-0.038
	(16.373)	(0.088)	(0.090)	(0.082)	(0.079)
Obs.	11,248	11,248	11,248	11,248	11,248
Adjusted R^2	0.002	0.104	0.009	0.016	0.037
Pre-policy Mean	9.177	9.084	0.283	0.708	0.326
Panel B: Application Received					
VARIABLES	Total Num	Female Num	Weekly Num	Weekly Female Num	
	(1)	(2)	(3)	(4)	
$D_{ct} \times \Delta\%\text{ML}_c$	7.820	-4.071	-0.214	-0.167	
	(9.836)	(6.791)	(0.630)	(0.220)	
Obs.	11,248	11,248	219,614	219,614	
Adjusted R^2	0.018	0.009	0.327	0.295	
Pre-policy Mean	22.770	11.310	1.480	0.752	

Back

Applicant side: Empirical Strategy

- **Average changes in applicants' behavior after the extension of maternity leave:**

$$\boldsymbol{Y_{ijct} = \alpha + \kappa D_{ct} \times \Delta\%ML_{ct} \times Female_i + \delta_{c*t} + \delta_{female*t} + \delta_i + \epsilon_{ijct}}$$

  - Y_{ijct}: characteristic of job posting j applied to by individual i living in residence city c at calendar week t
  - $\boldsymbol{\kappa}$: differential response of female applicants to the extension of maternity leave relative to male

  - δ_{c*t}: residence City-by-Time (Calendar year-week) fixed effects
  - $\delta_{female*t}$: female-by-week fixed effects
  - δ_i: applicant fixed effects.
  - ϵ_{ijct}: error term; clustered at the **residence city level**.

Applicant Side: Potential Mechanism of Application Behavior Change

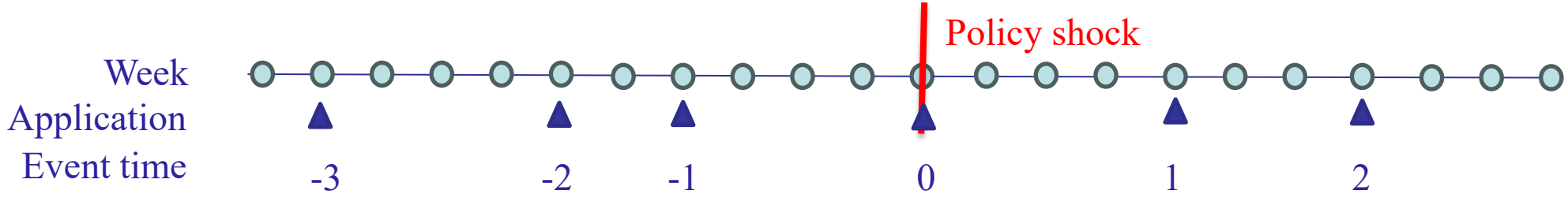
- **Why Do Women Apply to Lower-Wage Jobs? (Three Possible Mechanisms)**
  - Lower callback rates → downward revision of wage expectations
  - Longer job search duration → lower expected wages (×)
  - Shift in preferences toward non-wage job attributes → flexible hours, social insurance benefits (×)
  - Empirical check: control for search duration & job features
    - Coefficients change negligibly → Neither preferences nor search duration fully explain wage decline
- **Why Do Women Apply to Jobs with Time-Related Amenities? (Three Possible Drivers)**
  - Growing preference for work–life balance
  - Strategic shift toward jobs with smaller female penalties
  - Correlation with low wages (×) (results robust to wage control)

Applicant side: Empirical Strategy

- **Dynamic changes:**

$$Y_{ijct} = \alpha + \sum_{r=-5, r\neq -1}^{r=5} \beta_r I_r \times \Delta\%ML_{ct} \times Female_i + \delta_{c*t} + \delta_{female*t} + \delta_i + \epsilon_{ijct}$$

- Y_{ijct}: characteristic of job posting j applied to by individual i living in residence city c at calendar week t
- I_r: An event time dummy variable, which equals 1 if event time equals r.
  - Event time=-1 means the last application week before the policy change



- δ_{c*t}: residence City-by-Time (Calendar year-week) fixed effects
- $\delta_{female*t}$: female-by-week fixed effects
- δ_i: applicant fixed effects.
- ϵ_{ijct}: error term; clustered at the residence city level

Dynamic Effects of Extension on Job Characteristics of Applied Positions

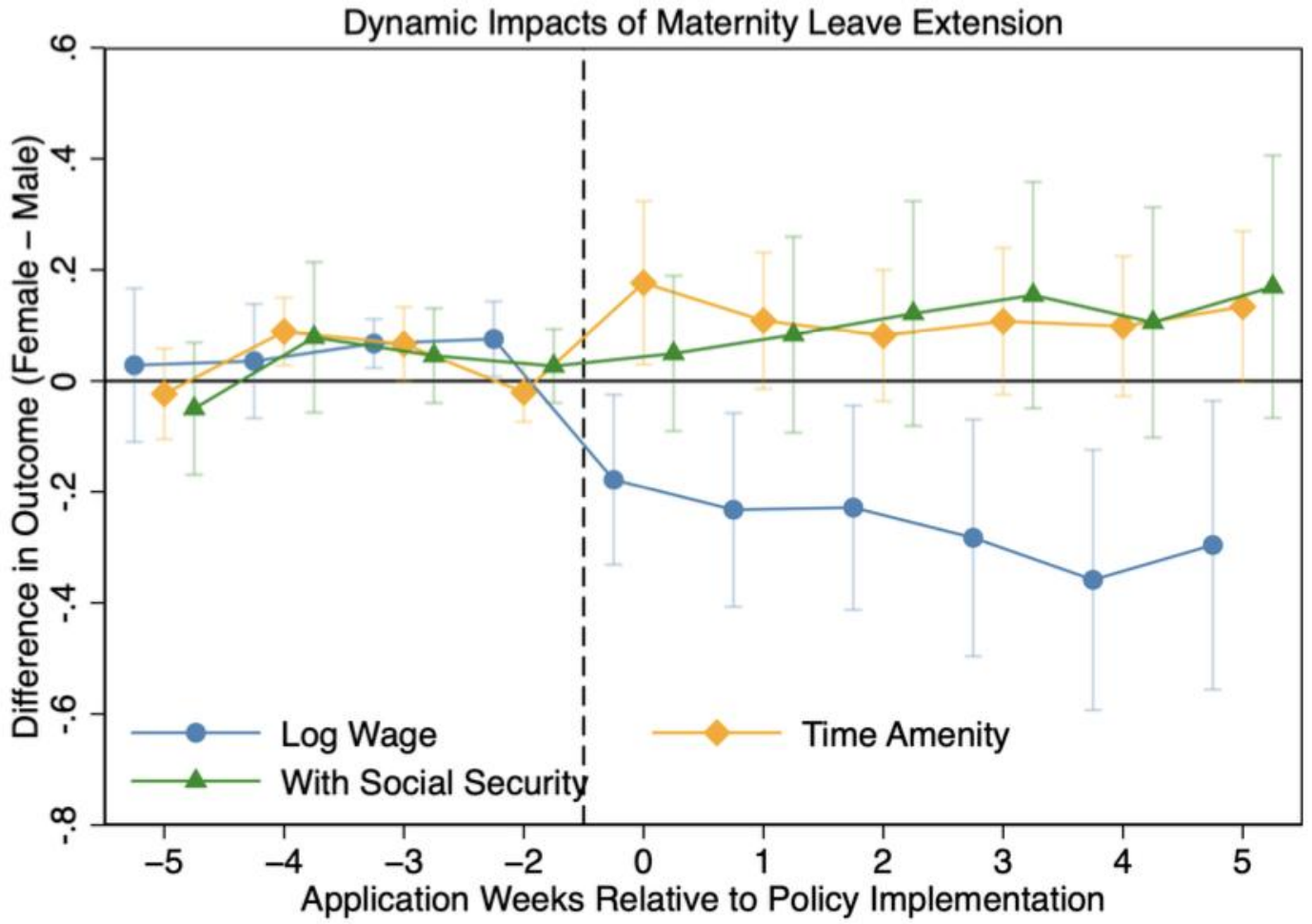


Figure 4: Dynamic Effects of Extension on Job Characteristics of Applied Positions

Effects of Extension on Characteristics of Applied Job: Alternative Controls

- **Wage Level:** not explained by longer search or preference shifts
- **Time-related Amenities:** not driven by lower wages (robust to wage controls)
  - Reflects preference shift or strategic response to lower discrimination

Table A5: Effects of Extension on Characteristics of Applied Job: Alternative Controls

	Log Wage				Time Amenity
VARIABLES	(1)	(2)	(3)	(4)	(5)
$D_{ct} \times \Delta\%\text{ML}_{ct} \times$ Female	-0.234***	-0.242***	-0.228***	-0.236***	0.163*
	(0.074)	(0.074)	(0.072)	(0.071)	(0.089)
Time Amenity			-0.020***	-0.020***	
			(0.002)	(0.002)	
Social Insurance			0.043***	0.043***	
			(0.005)	(0.005)	
Log Wage					-0.027***
					(0.003)
Search Day FE	No	Yes	No	Yes	No
Obs.	293,221	293,207	293,221	293,207	293,221
Adjusted R^2	0.613	0.613	0.614	0.614	0.053
Pre-policy Mean	9.033	9.033	9.033	9.033	0.309