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Introduction

- The “Later (marriage), Longer (interval), Fewer (children)” policy (LLF):** The first nationwide family planning policy in 1969 in response to a population boom in China in the 1960s, ten years before the One-Child Policy.
- The LLF (province-level rollout, 1969-1975): coercive birth limits for *Han* ethnic majority, 2 for urban and 3 for rural families; Local organizations to conduct IUD insertions, sterilizations; state controls economic lives, e.g., job, food, migration.
- Between 1969 and 1978, China’s total fertility rate decreased from 5.7 to 2.7 children, with ≈ 60% of this decline attributable to the LLF policy.
- In the 1960s-80s, China’s female labor force participation (LFP) was among the world’s highest, with urban rates > 90%, slightly below men’s. In 1970, U.S. female LFP was 43.3%.
- This paper:** Despite high LFP, gender gaps in career advancement persisted long-term. The LLF, which reduced fertility burdens, help narrow these gaps.
- E.g., *Prob(being a manager in one’s career)* was 23% lower for urban women (mean: 25%). The LLF reduced this gap by 14% on average.
- Women more exposed to LLF tend to pursue college education, increase labor input, and rely less on offspring for old-age support (no impact on men) → human capital accumulation is a key mechanism.

Method

A DiD using the province-*hukou*-age cohort level variation in the LLF exposure:

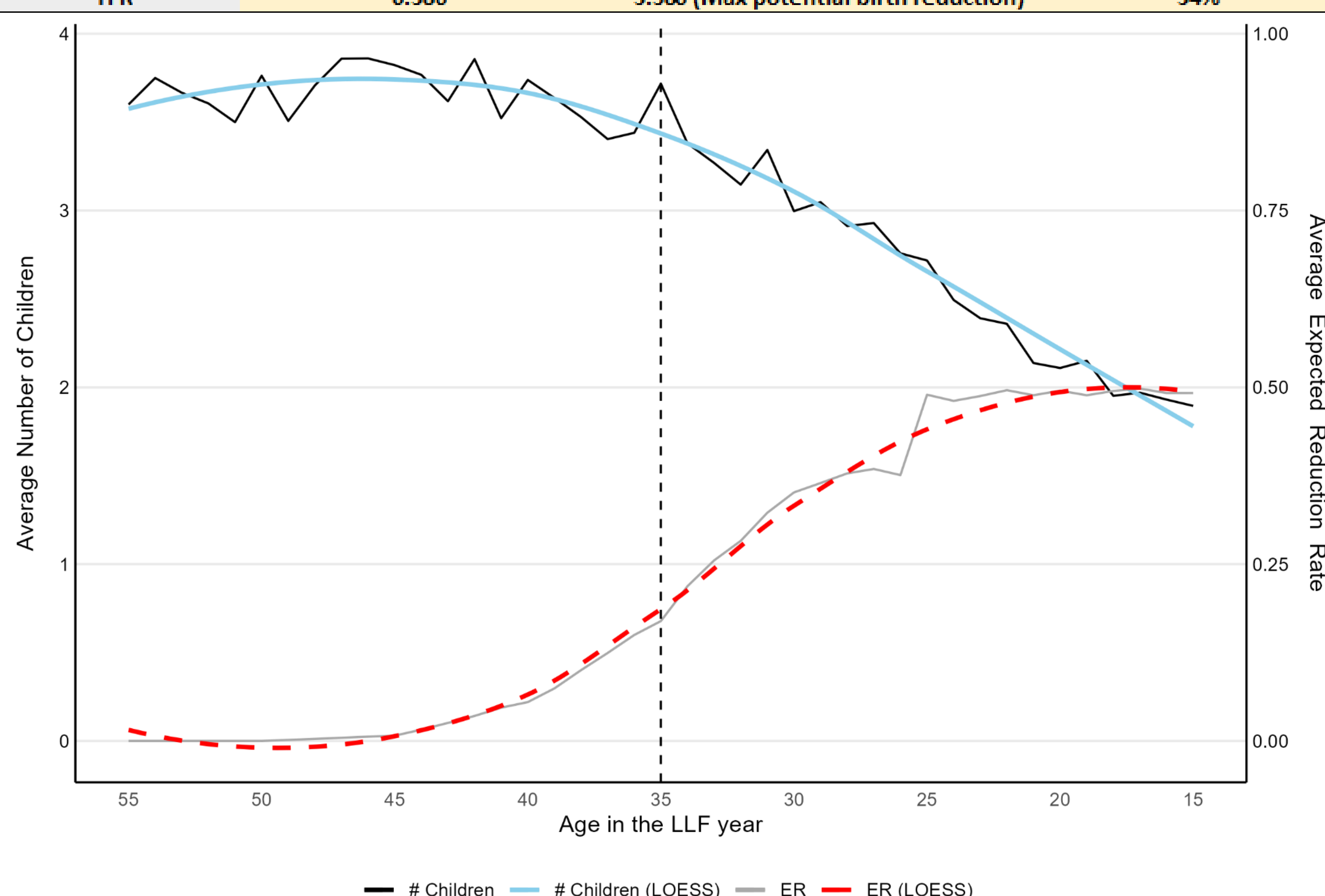
$$y_i = \beta_1 ER_{hpc(i)} + \beta_2 Female_i + \beta_3 ER_{hpc(i)} \times Female_i + \rho X_{ipc} + \eta_{c(i)} + \mu_{hd(i)} + \varepsilon_i$$

$$ER_{hpc} = \begin{cases} 0, & \text{if } TFR_{hp} - quota_h \leq 0 \text{ or } a > 49 \\ \min \{ \sum_{a=15}^{49} AFR_{hp}(a) \cdot I[c+a \geq LLF_p], \\ TFR_{hp} - quota_h \} / TFR_{hp}, & \text{otherwise} \end{cases}$$

- y_i : ordinal categorical variables - the highest manager level achieved in i 's career (*Mgr*, 0 = never a manager; 1 = lower-level manager; 2 = top manager); administrative rank (*Admin*, a CPC ranking within the state sector, 1-7)
- Female*: gender dummy to capture the gender gap in y_i
- ER*: expected birth reduction (policy exposure)
- ER × Female*: variable of interest, the effect of *ER* on the gender disparities
- Controls: education; provincial GDP per capita growth (1978 to i 's retirement year); healthcare resources per capita; interact all with a female dummy; FEs
- Samples: *Han*, retired or near the retirement age; Main data: Chinese General Social Survey, 12 waves 2003-2021, reported retrospective job experience

Policy exposure (ER) & Fertility

Urban Hubei female		Aged 29 in 1971	
Age group	Age-sepecific fertility rate (AFR)	Number of children	Expected reduction (ER)
[15, 19]	0.056		
[20, 24]	0.327		
[25, 29]	0.332	3.575 (Children born, above quota)	
[30, 34]	0.293		
[35, 39]	0.236		
[40, 44]	0.105		
[45, 49]	0.011	3.225 (Children not yet born)	47%
Quota (LLF)	2		
TFR	6.799	4.799 (Max potential birth reduction)	
Rural Hubei female		Aged 19 in 1971	
[15, 19]	0.048	0.24 (Children born, below quota)	
[20, 24]	0.301		
[25, 29]	0.351		
[30, 34]	0.291		
[35, 39]	0.216		
[40, 44]	0.099		
[45, 49]	0.011	6.345 (Children not yet born)	
Quota (LLF)	3		
TFR	6.586	3.586 (Max potential birth reduction)	54%



Main results

	Han				Minority	
	Urban		Rural		All	
	(1) Mgr	(2) Admin	(3) Mgr	(4) Admin	(5) Mgr	(6) Admin
Female	-0.257*** (0.034)	-0.566*** (0.129)	-0.130** (0.058)	-0.296 (0.330)	-0.045 (0.116)	0.011 (0.551)
ER × Female	0.119*** (0.045)	0.466*** (0.168)	0.159** (0.075)	0.193 (0.301)	0.084 (0.215)	-0.414 (0.958)
ER	-0.132** (0.067)	-0.500** (0.218)	-0.057 (0.137)	-0.075 (0.619)	0.139 (0.242)	-0.684 (0.944)
Average gender gap narrowed	15.9%	25.8%	44.4%			
Mean dep var	0.379	1.590	0.296	1.171	0.363	1.472
Mean ER	0.344	0.313	0.363	0.399	0.408	0.346
Observations	11,378	4,918	5,922	708	901	231
Number of clusters	849	774	739	28	46	31
Other controls	✓	✓	✓	✓	✓	✓
Cohort FE	✓	✓	✓	✓	✓	✓
Province- <i>hukou</i> FE	✓	✓	✓	✓	✓	✓

- Urban: -0.257 gap or 67.8% relative to the mean dep var (0.379, ordinal categorical); Average exposure reduces these disparities by ≈ 20%**

Further Analysis

- (i) Extensive margin only: not helpful for further promotion to top managerial positions. Other factors directly contributing to the formation of the “Boys' Club” may not be effectively addressed by the fertility restriction policy.
- (ii) More pronounced for women in industries with more male workers, where they typically face greater work disadvantages due to the child penalty.
- (iii) No anticipation of policy rollout: insignificant difference in birth spacing between [LLF-8, LLF-4] and [LLF-4, LLF-1] groups.
- (iv) Unlikely confounded by potential selection biases: I. (career women) delayed birth before the LLF may later be canceled by the LLF → excl. samples with birth interval ≥ 4; II. gender composition of children may lead mothers to housewife roles → even no sons has little impact on career exit: -0.611 yrs (female mean age at exit: 53.79).
- (v) Robustness: Ordered Probit; Control contemporaneous political shock, “Later (marriage age)”; Rossi & Xiao (2023) measurement of ER; Retired samples only.

Potential Mechanisms

- Human capital accumulation – exposed women have higher education or increased working years?
- Compliance rewards - government compensates compliant families, boosting career advancement for both men and women - more exposed individuals have less (more) reliance on children (government) for old-age support?

	Urban				Rural			
	(1) High school (Dummy)	(2) College (Dummy)	(3) Work years (Demeaned)	(4) Reliance on children	(5) High school (Dummy)	(6) College (Dummy)	(7) Work years (Demeaned)	(8) Reliance on children
Panel A: Female samples								
ER	-0.048 (0.055)	0.073*** (0.022)	7.095** (3.295)	-0.240** (0.108)	-0.048 (0.042)	0.072** (0.035)	0.578 (1.504)	-0.440*** (0.166)
Mean dep var	0.088	0.030	0.304	0.952	0.020	0.004	-1.832	1.347
Mean ER	0.334	0.340	0.364	0.350	0.397	0.407	0.382	0.402
Observations	6,245	7,069	1,278	4,324	9,075	10,384	2,963	8,265
Number of clusters	734	807	442	677	791	862	650	828
Panel B: Male samples								
ER	-0.012 (0.056)	0.055 (0.037)	-1.227 (5.199)	-0.107 (0.120)	-0.045 (0.036)	0.047 (0.045)	-3.813 (4.384)	0.138 (0.200)
Mean dep var	0.139	0.073	3.332	0.927	0.033	0.011	0.408	1.315
Mean ER	0.350	0.277	0.368	0.356	0.402	0.393	0.392	0.412
Observations	5,829	5,154	1,148	4,305	17,862	7,748	2,736	7,585
Number of clusters	767	808	449	742	859	839	628	801
Other controls	✓	✓	✓	✓	✓	✓	✓	✓
Cohort FE	✓	✓	✓	✓	✓	✓	✓	✓
Province- <i>hukou</i> FE	✓	✓	✓	✓	✓	✓	✓	✓

- Average ER ↑ an urban female’s probability of having a college degree by 0.020 → 66.7% of the mean of the dep var (0.030) → Support I.**
- Average ER ↑ 2.584 years of working (≈1.28 births reduced, or 2.02 years per birth); Bloom et al. (2009): across countries, each birth reduces total labor supply by about 1.9 years per woman → Support I.**
- ↓ reliance of urban females on children for old-age support by 25.2% (relative to the mean); No similar effect was found for men → Not II.**
- Implication: Improving access to and reducing the cost of effective contraceptives have a similar potential to enhance women's status.

Main References

- Chen, Yi and Hanming Fang, “The long-term consequences of China’s “later, longer, fewer” campaign in old age,” *Journal of Development Economics*, 2021, 151, 102664.
- Rossi, Pauline and Yun Xiao, “Spillovers in Childbearing Decisions and Fertility Transitions: Evidence from China,” *Journal of the European Economic Association*, 04 2023, jvad025.
- Bloom, David E, David Canning, Gunther Fink, and Jocelyn E Finlay, “Fertility, female labor force participation, and the demographic dividend,” *Journal of Economic growth*, 2009, 14, 79–101.