

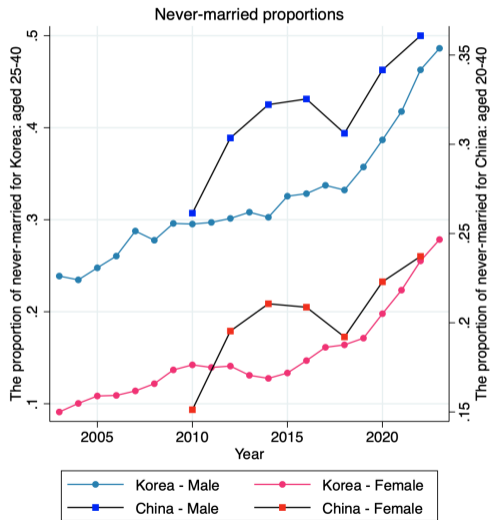
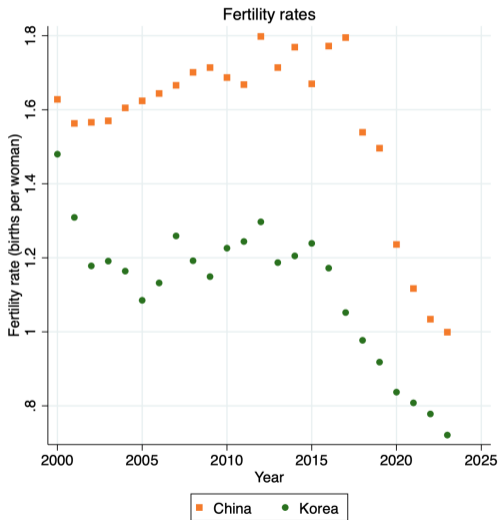
Recent socioeconomic differentials in marriage rates in Korea and China: A Comparative Study

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Recent trends in fertility and Never-Married (NVM) rates



- This study explores the recent rapid decline in marriage rates in Korea and China, with a focus on examining
 - ▶ variations in these trends across different socioeconomic groups
 - ▶ underlying factors driving these rapid demographic shifts
- We utilise a nationally representative survey data from each country
- The results suggest that
 - ▶ Marriage rates have declined most rapidly among *low-SES* individuals, especially urban men, in both Korea and China
 - ▶ More Chinese women are delaying marriage, mirroring Korea's trend two decades ago
 - ▶ A growing share of low-educated women in Seoul remain unmarried past 40, suggesting a rise in permanent singlehood
 - ▶ The link between marriage and income or parental education has become stronger, particularly for Korean men, but not for Chinese men or women.

Research questions

- 1 Which socioeconomic group has experienced the fastest decline in marriage rates during the past decade?
- 2 How do recent marriage trends in Korea and China compare - similarities and differences?
- 3 How do recent patterns differ from those observed in earlier periods?

- Providing new evidence on recent marriage trends in East Asia, offering insights into the common drivers of low fertility and marriage rates
- Utilising national representative survey data to examine the role of socioeconomic factors, such as parental education

- 1 Korean Labor and Income Panel Study (KLIPS)
 - ▶ An annual longitudinal survey conducted by the Korea Labor Institute since 1998
 - ▶ This study uses data from 2003 to 2023 (21 waves) on individuals aged 25 to 45
- 2 China Family Panel Studies (CFPS)
 - ▶ A biennial longitudinal survey launched in 2010 by the Institute of Social Science Survey at Peking University
 - ▶ For our analysis, we use CFPS waves from 2010 to 2022 (7 waves), restricting the sample to individuals aged 20 to 40

Descriptive statistics

	Korea: ages 25-45		China: ages 20-40	
	Male	Female	Male	Female
Never-married	0.38 (0.48)	0.22 (0.42)	0.32 (0.46)	0.20 (0.40)
Age	35.88 (5.89)	35.87 (5.85)	30.18 (5.89)	30.02 (5.91)
Middle school or below	0.03 (0.15)	0.04 (0.17)	0.56 (0.47)	0.57 (0.46)
High school	0.28 (0.45)	0.34 (0.47)	0.22 (0.41)	0.20 (0.40)
3-year college	0.23 (0.42)	0.25 (0.43)	0.12 (0.32)	0.12 (0.32)
4-year university or above	0.46 (0.49)	0.38 (0.47)	0.11 (0.29)	0.11 (0.30)
Father's education: Middle school or below	0.48 (0.41)	0.49 (0.41)	0.82 (0.46)	0.82 (0.46)
Father's education: High school or above	0.51 (0.48)	0.51 (0.48)	0.18 (0.35)	0.18 (0.35)
Living in Urban/Seoul	0.20 (0.40)	0.20 (0.40)	0.50 (0.50)	0.52 (0.50)
Urban hukou			0.24 (0.42)	0.23 (0.42)
Observations	58894	58606	33643	34108

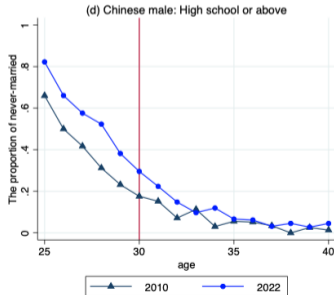
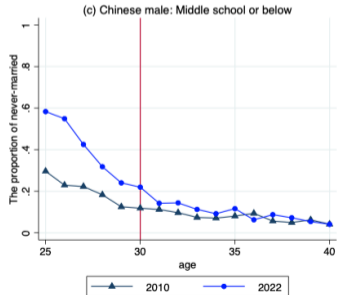
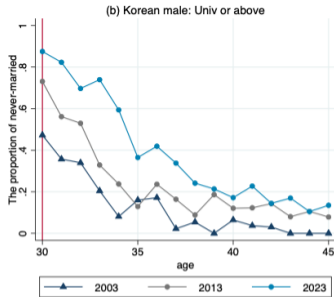
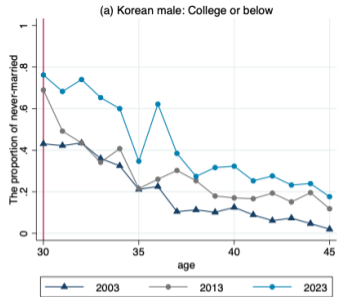
1. Recent trends in NVM rates

Recent trends in NVM rates: Male

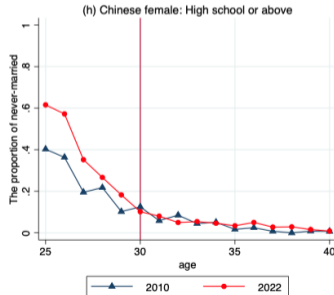
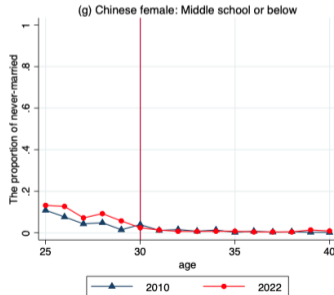
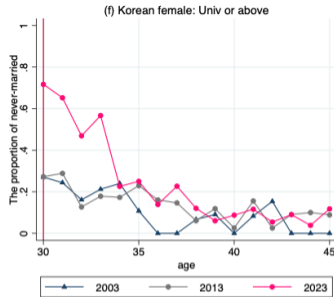
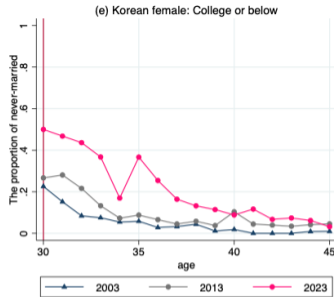
(1) A substantial rise in NVM rates among Korean men across all education levels

(2) Marriage is getting delayed more than before among Chinese men but still most of them experience marriage before 40

(3) NVM rates decline faster among educated males than the rest in 30s in both countries



Recent trends in NVM rates: Female



(1) High-educated Korean women: No significant rise in NVM rates post-35

(2) Low-educated Korean women: Steady increase in NVM

(3) Low-educated Chinese women: No significant changes

(4) High-educated: Delays mirroring Korea's 2003 trend

(5) Near-universal marriage persists in China (mid-30s cutoff)

- The overall prevalence of never-married individuals has increased in both Korea and China over recent decades.
- The rise in NVM rates is more pronounced among men in both China and Korea, especially after age 35, which is especially prominent among less-educated men.
- Despite the increasing trends, most women in China still marry by their early 30s, regardless of education levels, suggesting delayed rather than forgone marriage.
- In Korea, 10% of women remain never-married at age 40 in 2023, which indicates a stronger shift toward either prolonged delay or permanent singlehood.
- For Korean women, education is no longer a strong predictor for recent NVM increases after age 35, instead, the rise for this age range shows a stable increase among less-educated women.

2. Estimating changes in NVM rates

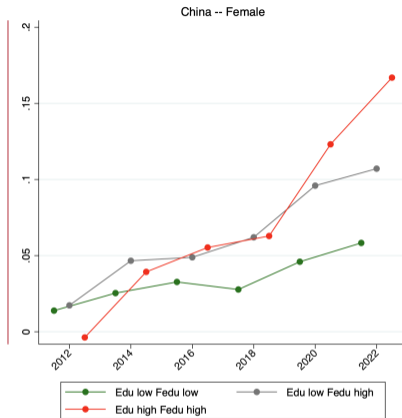
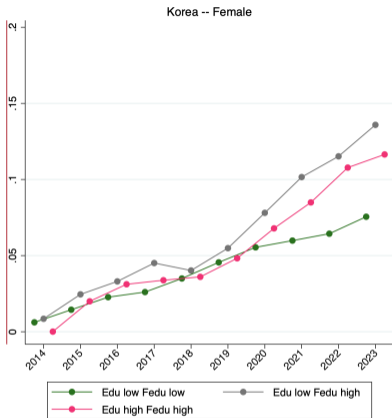
Estimating changes in NVM rates

$$NV_{ict} = \alpha_0 + \beta_t + \delta_c + \gamma X_{it} + \epsilon_{ict} \quad (1)$$

- $NV_{ict} = 1$ if i is never-married in year t
- β_t captures changes in NVM rates relative to the reference year
- δ_c region fixed effects
- X_{it} includes individual and household characteristics, varying by the specific hypotheses tested later in the paper.
 - ▶ Baseline Korea: age fixed effects
 - ▶ Baseline China: age fixed effects, dummy variables indicating whether individual i 's household registration (hukou) is classified as urban (non-agricultural) and whether the individual resides in an urban area.

Estimating changes in NVM rates

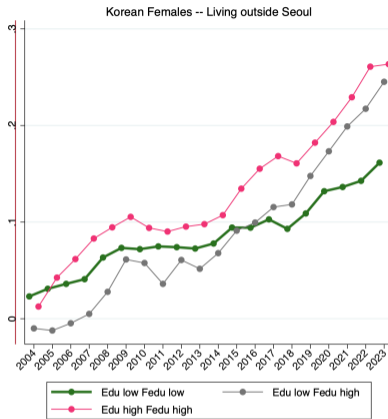
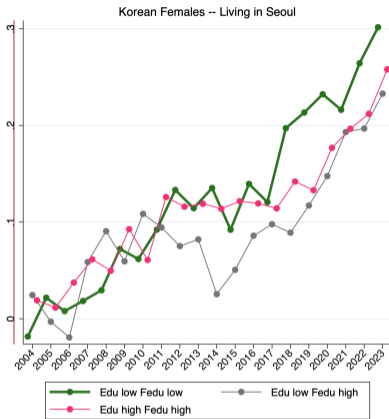
- We divide each country sample by two-way classification
 - ▶ Individual education: Low and High
 - ▶ Korea: *low* includes individuals with a 3-year college education or less
 - ▶ China: *low* includes individuals with a middle school education or below
 - ▶ Father's education: Low and High
 - ▶ Korea: *low* includes individuals whose father completed a middle school education or below
 - ▶ China: *low* includes individuals whose father completed a primary school education or below
 - ▶ Excluded High-Low groups due to insufficient sample size
- In addition, we examine trends by regional groups - Seoul and urban China



Estimated changes in NVM rates
Female

Korea vs China

- A sharp NVM increase: Higher-educated Chinese women from highly-educated families, which mirrors trends among Korean women between 2003-2013
- Minimal change: Lowest-SES group shows marginal growth in NVM rates

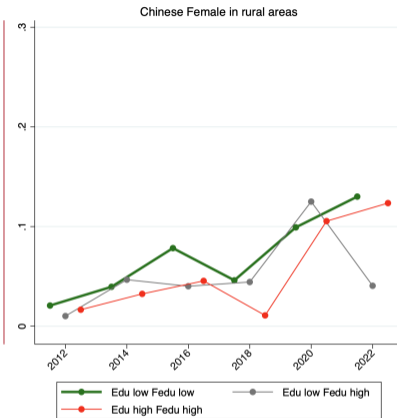
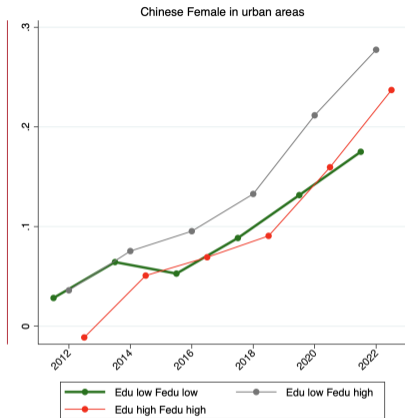


Estimated changes in NVM rates

Korean Female

Seoul vs Non-Seoul

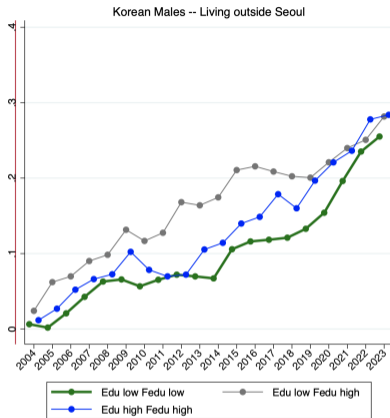
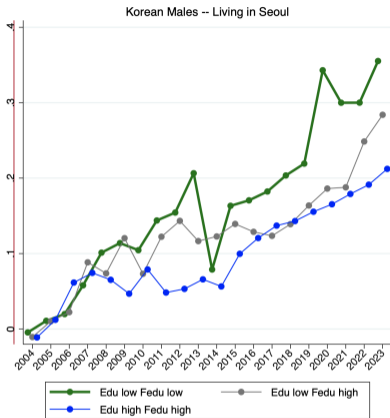
- A clear heterogeneity between women inside and outside Seoul
- Lowest-SES women exhibit the fastest increase in NVM rates in Seoul, while outside Seoul, the sharpest increase is among high-SES women.



Estimated
changes in
NVM rates
Chinese
Female

Urban vs Rural

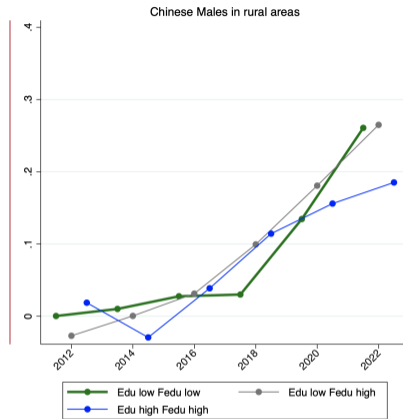
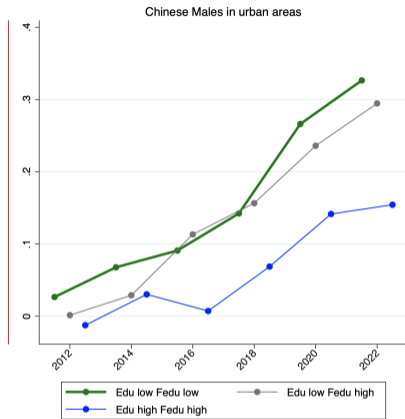
- Such heterogeneity is not observed among Chinese women
- Again, Urban Chinese females exhibit a pattern somewhat similar to that of Seoul Korean women in the 2000s



Estimated changes in NVM rates Korean Male

Seoul vs Non-Seoul

- Highest-SES men exhibit the slowest growth in NVM rates in Seoul
- Lowest-SES men show the fastest increase in Seoul since mid-2010s
- The pattern is the opposite outside Seoul



Estimated
changes in
NVM rates
Chinese Male

Urban vs Rural

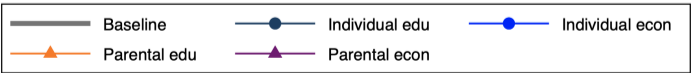
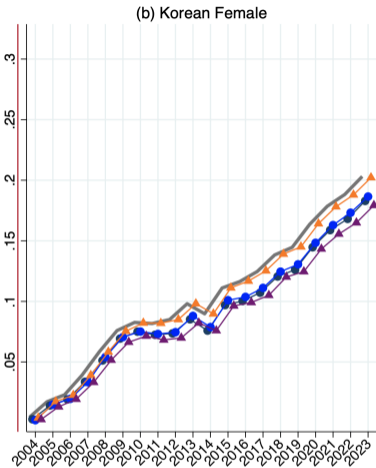
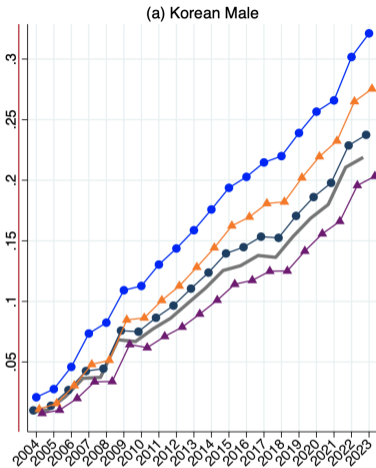
- Consistent with Seoul males, the lowest-SES shows the fastest rise in NVM rates
- Urban Chinese men in the highest-SES group experienced the slowest increase

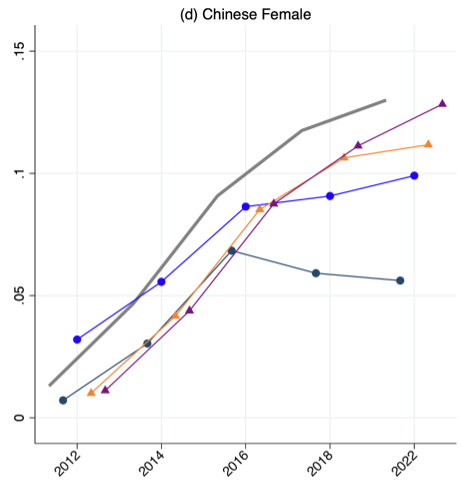
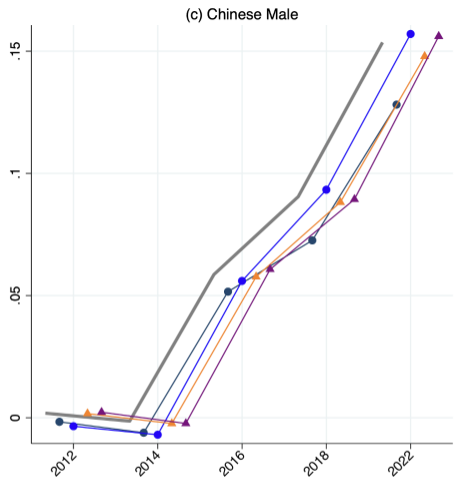
- NVM rates rose fastest for low-SES men and women in Seoul, while for high-SES groups outside Seoul
 - ▶ This suggests that while rising SES still contributes to marriage delays, other factors such as financial constraints may be increasingly driving declines in highly urbanised areas in Korea
- Chinese men exhibit a similar pattern with Seoul sample - Fastest NVM growth among low-SES, slowest among high-SES urban men
- No clear urban-rural divide among Chinese women, though urban patterns resemble Seoul trends in the 2000s

3. Underlying factors associated with changes in NVM rates

$$NV_{ict} = \alpha_0 + \beta_t + \delta_c + \gamma X_{it} + \epsilon_{ict} \quad (2)$$

- $NV_{ict} = 1$ if i is never-married in year t
- β_t captures changes in NVM rates relative to the reference year
- δ_c region fixed effects
- X_{it} additionally includes each below set, separately
 - ▶ (individual edu) education dummies
 - ▶ (individual econ) log of annual personal income, occupation dummies
 - ▶ (parental edu) paternal and maternal education dummies
 - ▶ (parental econ) paternal employment type dummies, log of estimated paternal income, paternal occupation code dummies
- Individuals who do not have income information, including unemployed, are excluded





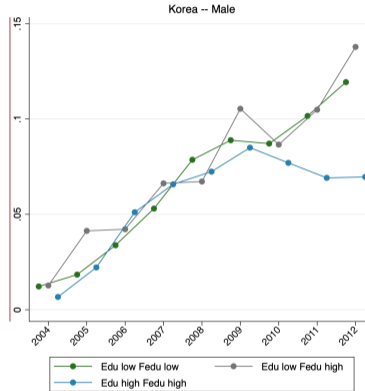
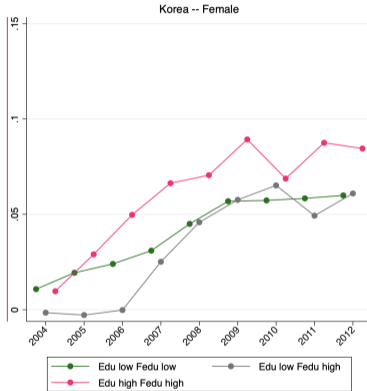
Underlying factors: Summary

- The gap between Baseline and SES-controlled estimates widens substantially for Korean males
- This indicates the positive effect of higher SES on marriage rates has grown more pronounced among them in recent years
- For Korean females, we observe only modest changes in the gap across years, though with a marginally increasing trend

- In China, the marriage-delaying effects of SES continue to outweigh potential positive effects (e.g., financial capabilities increasing marriage likelihood)
- Notably, the role of education in delaying marriage has grown substantially among Chinese women since 2018

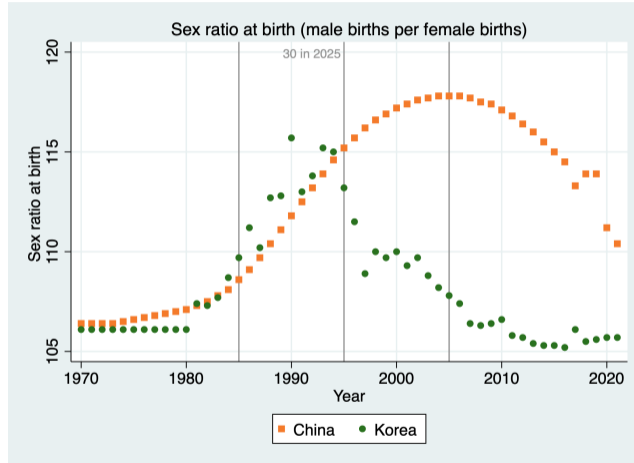
- This paper provides descriptive evidence on the relationship between SES factors and the recent rapid decline in marriage rates in Korea and China
- The results suggest that
 - ◇ Low-SES individuals face the most rapid decline in marriage rates among Korean and Chinese men, especially those living in urban regions
 - ◇ Educational advancement seems to explain the recent rise in NVM rates among Chinese women, while the trends for Korean women suggests other factors significantly increasing NVM rates for low-SES women in a highly urbanised area - Seoul
 - ◇ The association between marriage likelihood and income or parental education has become stronger for Korean men but not for Chinese men or women
 - ◇ Some suggestive patterns indicate that Chinese women marriage rates seem to mirror that of Korean women twenty years ago

Thank you

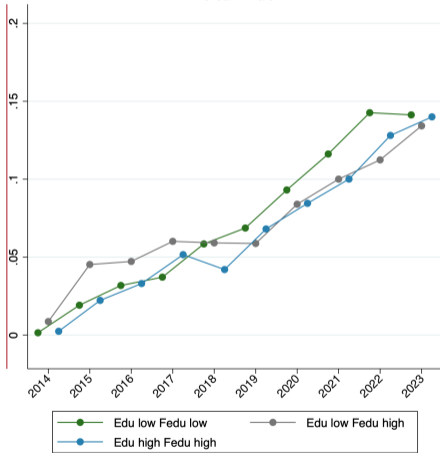


- Highest-SES group showed fastest increase (2003-2013), mirroring current trends among Chinese women

Appendix: Imbalanced sex ratios



Korea -- Male



China -- Male

