Online Appendices

A   The effect of high sex ratios by region of residence

It may be useful to examine the effect of high sex ratios by region of residence. Accordingly, we divide our sample into two groups. The first group includes families in urban regions, and the second includes families in rural regions.

Appendix Table A5 reports the results. For the urban subgroup, we observe that the positive sign of the effect of high sex ratios is preserved, the statistical significance is retained, and compared with the baseline results in Table 3, the magnitude appears larger. For example, a 1 standard deviation higher sex ratio is associated with a 7.3 percentage point larger probability of participating in the stock market in urban first-son families relative to urban first-daughter families. For the rural subgroup, the fraction of stock market participants and average stock share of wealth—0.005 and 0.003, respectively—are negligible. This may be because of the relatively high participation costs they face or their limited financial knowledge. We find that variation in these variables is too small to generate reasonable results.

Appendix Table A5 also reports results using the survey-based measure of risk taking defined Section 4.5 as the dependent variable. There is enough variation in this risk-taking measure across both urban and rural households. The mean is 0.134 for the urban group and 0.127 for the rural group. For both groups, the results are similar to the baseline in column (1), Table 6. Therefore, the effect of high sex ratios by region of residence on risk taking supplements that on household portfolio choice.

B   Appendix tables and figures

Table A1 The effect of having a first son on household portfolio choice

Dependent variable		Stocks		All risky assets	
		Participation (1)	Share (2)	Participation (3)	Share (4)
A: All families	First son	-0.011 (0.008)	-0.002 (0.004)	0.007 (0.010)	0.003 (0.006)
	Observations	4,363	4,363	4,363	4,363
	R-squared	0.181	0.127	0.219	0.164
B: Sex ratio<Q1	First son	-0.004 (0.011)	-0.002 (0.007)	0.001 (0.016)	-0.000 (0.009)
	Observations	926	926	926	926
	R-squared	0.218	0.173	0.240	0.177
C: Sex ratio>Q3	First son	0.022** (0.010)	0.010* (0.006)	0.057*** (0.019)	0.033*** (0.011)
	Observations	1,067	1,067	1,067	1,067
	R-squared	0.217	0.219	0.278	0.223
	Model	LPM	OLS	LPM	OLS
	Other controls	Yes	Yes	Yes	Yes
	Prefecture fixed effects	Yes	Yes	Yes	Yes

Notes: Data on county-level sex ratios are from the 2010 China population census. Data on other variables are from the 2013 CHFS. Panel A is estimated based on our sample of CHFS households. Panels B and C are estimated based on families in counties with a balanced sex ratio (smaller than the first quartile Q1, 1.09) and families in counties with a high sex ratio (larger than the third quartile Q3, 1.22), respectively. Other controls include various parental and household characteristics—both parents' age, education, hukou, political status, and occupational dummies, plus age of the first child, region of residence, and ethnicity. Regressions are weighted by CHFS sampling weights. Standard errors clustered at the county level are in the parentheses.

   ***Significant at the 1% level.
   **Significant at the 5% level.
   *Significant at the 10% level.

Table A2 Sex ratios and household portfolio choice by child gender

Dependent variable		Stocks		All risky assets	
		Participation (1)	Share (2)	Participation (3)	Share (4)
A: First-son families	Sex ratio	0.299***	0.167**	0.470***	0.265***
		(0.101)	(0.069)	(0.141)	(0.085)
	Observations	2,246	2,246	2,246	2,246
	R-squared	0.287	0.202	0.318	0.283
B: First-daughter families	Sex ratio	-0.027	-0.001	-0.085	0.038
		(0.180)	(0.075)	(0.199)	(0.097)
	Observations	2,117	2,117	2,117	2,117
	R-squared	0.256	0.187	0.287	0.225
C: Differences in effect, s-d		0.326	0.168	0.555	0.227
	Hausman test p-value	0.030	0.081	<0.01	0.037
	Model	LPM	OLS	LPM	OLS
	Other controls	Yes	Yes	Yes	Yes
	Prefecture fixed effects	Yes	Yes	Yes	Yes

Notes: Data on county-level sex ratios are from the 2010 China population census. Data on other variables are from the 2013 CHFS. Panels A and B are estimated based on first-son and first-daughter families, respectively. The null hypothesis of the Hausman test in panel C is that the effect of high sex ratios for first-son families in panel A is equal to the effect for first-daughter families in panel B. Other controls include various parental and household characteristics—both parents' age, education, hukou, political status, and occupational dummies, plus age of the first child, region of residence, and ethnicity. Regressions are weighted by CHFS sampling weights. Standard errors clustered at the county level are in the parentheses.

 ***Significant at the 1% level.

 **Significant at the 5% level.

 *Significant at the 10% level.

Table A3 Correlations between sex ratios and household portfolio choice

	Sex ratio	Stock market participation	Stock share	Risky-asset market participation	Risky-asset share
	(1)	(2)	(3)	(4)	(5)
Sex ratio	1				
Stock market participation	-0.002	1			
	[0.881]				
Stock share	-0.006	0.733	1		
	[0.716]	[<0.01]			
Risky-asset market participation	0.020	0.794	0.582	1	
	[0.179]	[<0.01]	[<0.01]		
Risky-asset share	0.008	0.658	0.782	0.754	1
	[0.593]	[<0.01]	[<0.01]	[<0.01]	
Observations					4,363

Notes: Data on county-level sex ratios are from the 2010 China population census. Data on other variables are from the 2013 CHFS. Statistics are based on our sample of CHFS households. Statistics are weighted by CHFS sampling weights. *p*-values are in the square brackets.

Table A4 Correlations between risk taking and household portfolio choice

	Risk-taking measure	Stock market participation	Stock share	Risky-asset market participation	Risky-asset share
	(1)	(2)	(3)	(4)	(5)
A: All					
Risk-taking measure	1				
Stock market participation	0.111	1			
	[<0.01]				
Stock share	0.098	0.733	1		
	[<0.01]	[<0.01]			
Risky-asset market participation	0.118	0.794	0.582	1	
	[<0.01]	[<0.01]	[<0.01]		
Risky-asset share	0.100	0.658	0.782	0.754	1
	[<0.01]	[<0.01]	[<0.01]	[<0.01]	
Observations					4,363
B: First-son families					
Risk-taking measure	1				
Stock market participation	0.181	1			
	[<0.01]				
Stock share	0.164	0.753	1		
	[<0.01]	[<0.01]			
Risky-asset market participation	0.168	0.737	0.555	1	
	[<0.01]	[<0.01]	[<0.01]		
Risky-asset share	0.160	0.638	0.751	0.749	1
	[<0.01]	[<0.01]	[<0.01]	[<0.01]	
Observations					2,246
C: First-daughter families					
Risk-taking measure	1				
Stock market participation	0.042	1			
	[0.054]				
Stock share	0.032	0.713	1		
	[0.146]	[<0.01]			
Risky-asset market participation	0.062	0.858	0.612	1	
	[<0.01]	[<0.01]	[<0.01]		
Risky-asset share	0.033	0.682	0.817	0.759	1
	[0.128]	[<0.01]	[<0.01]	[<0.01]	
Observations					2,117

Notes: Data are from the 2013 CHFS. Panel A is based on our sample of CHFS households. Panels B and C are based on first-son and first-daughter families, respectively. Statistics are weighted by CHFS sampling weights. p-values are in the square brackets.

Table A5 Sex ratios and household portfolio choice by region of residence

Subgroups	First son * Sex ratio (β_3) (1)	Observations (2)	Dependent variable mean (3)
A: Stock market participation			
Urban	0.811*	2,456	0.096
Rural		1,907	0.005
B: Stock share			
Urban	0.443*	2,456	0.035
Rural		1,907	0.003
C: Risky-asset market participation			
Urban	1.151**	2,456	0.139
Rural		1,907	0.014
D: Risky-asset share			
Urban	0.720***	2,456	0.058
Rural		1,907	0.007
E: Risk-taking measure			
Urban	0.825*	2,456	0.134
Rural	0.986***	1,907	0.127

Notes: Data on county-level sex ratios are from the 2010 China population census. Data on other variables are from the 2013 CHFS. Results are estimated using equation (1) by region of residence. Other controls include various parental and household characteristics—both parents' age, education, hukou, political status, and occupational dummies, plus age of the first child, region of residence, and ethnicity. Interactions of the first-son dummy with these variables, as well as prefecture fixed effects, are also controlled for. Regressions are weighted by CHFS sampling weights. Standard errors are clustered at the county level.

   ***Significant at the 1% level.

   **Significant at the 5% level.

   *Significant at the 10% level.
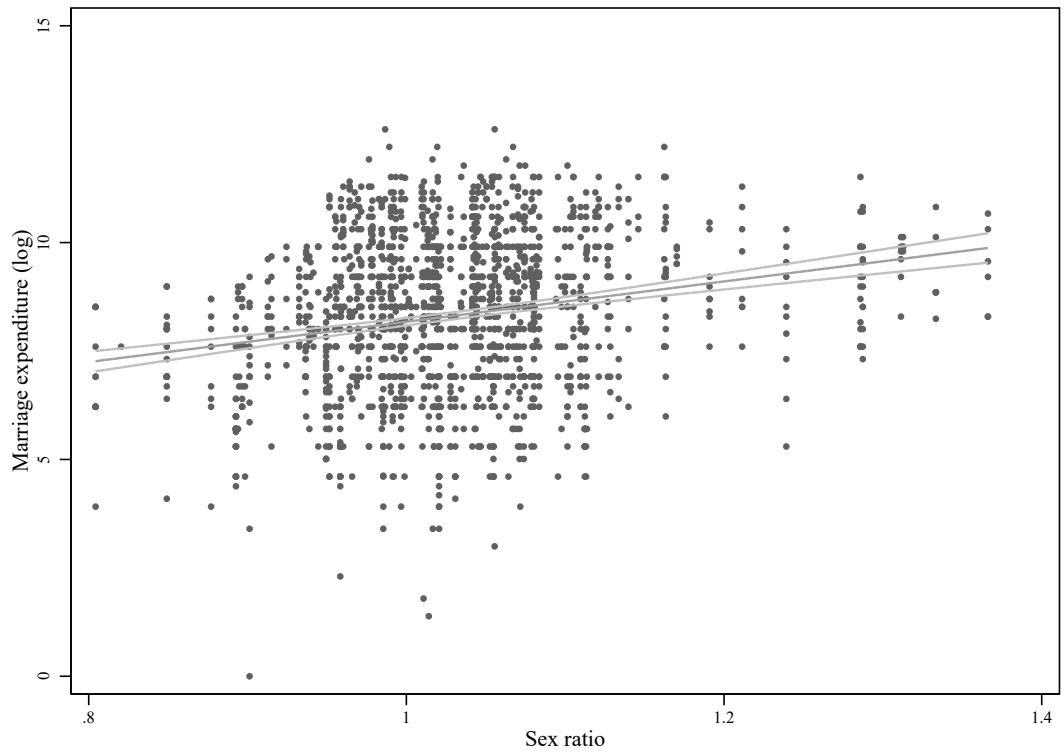
Figure A1 Local sex ratios and marriage expenditure in China

Notes: Data on county-level sex ratios are from the 2010 China population census. Data on household-level marriage expenditures are from the 2010 CFPS survey. The figure shows that marriage expenditure is generally larger in counties with higher sex ratios.
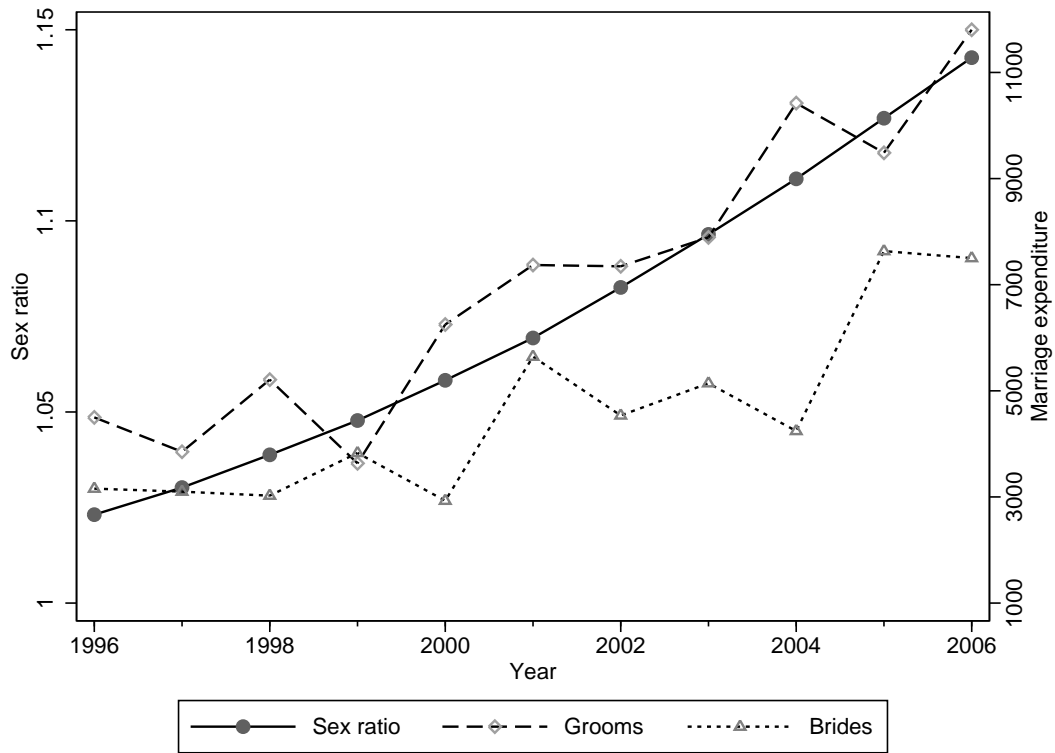
Figure A2 Trends in sex ratio and marriage expenditure in China

Notes: Data on nationwide sex ratios are from the 2010 China population census. Data on household-level marriage expenditures are from Brown et al. (2011). The figure shows that as the sex ratio rises, grooms' families are spending more over time relative to brides' families.