

How Marriage Market Conditions in China Influence the Elderly & Intergenerational Ties

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Challenges Facing China's Elderly

- Increased human capital, wages, and labor-force participation of non-elderly adults, especially women has raised the opportunity cost of family-produced care
- Greater employment opportunities in urban China & eastern provinces, along with fewer restrictions on migration have increased the distance between adult children & their elderly parents
- Rapid economic growth has raised the incomes of young adults, placing them in a better bargaining position vis a vis their elderly parents
- Declining fertility results in a marriage squeeze, giving young women more bargaining power vis a vis their husbands, and their parents-in-law

Imbalance in China's Marriage Market

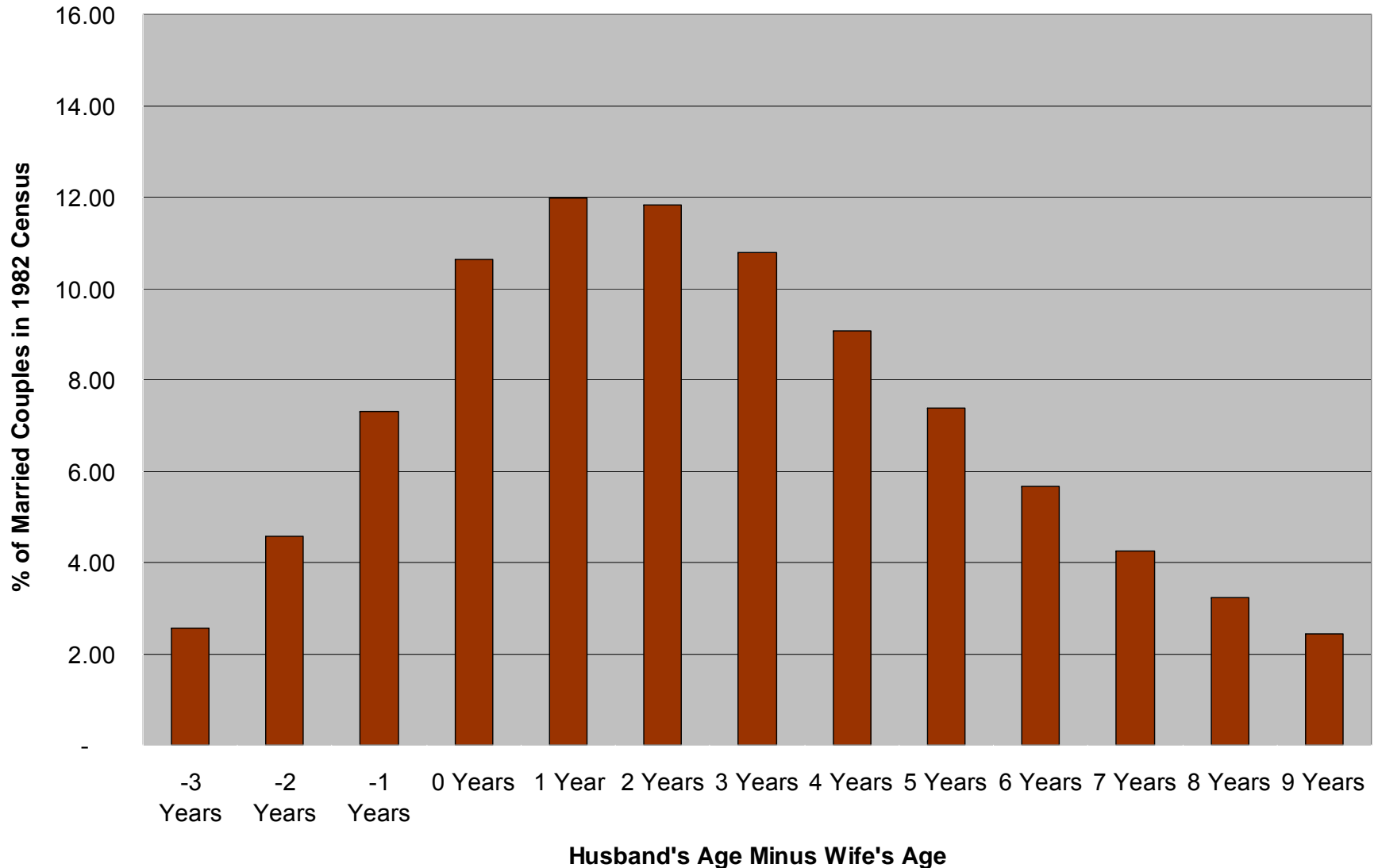
“Population experts caution that valuing girls may take a cultural sea change. Perhaps the more than 20 million lonely, surplus men predicted in China in 2020 will be the ones to bring it about.”

- *New York Times*, February 12, 2006

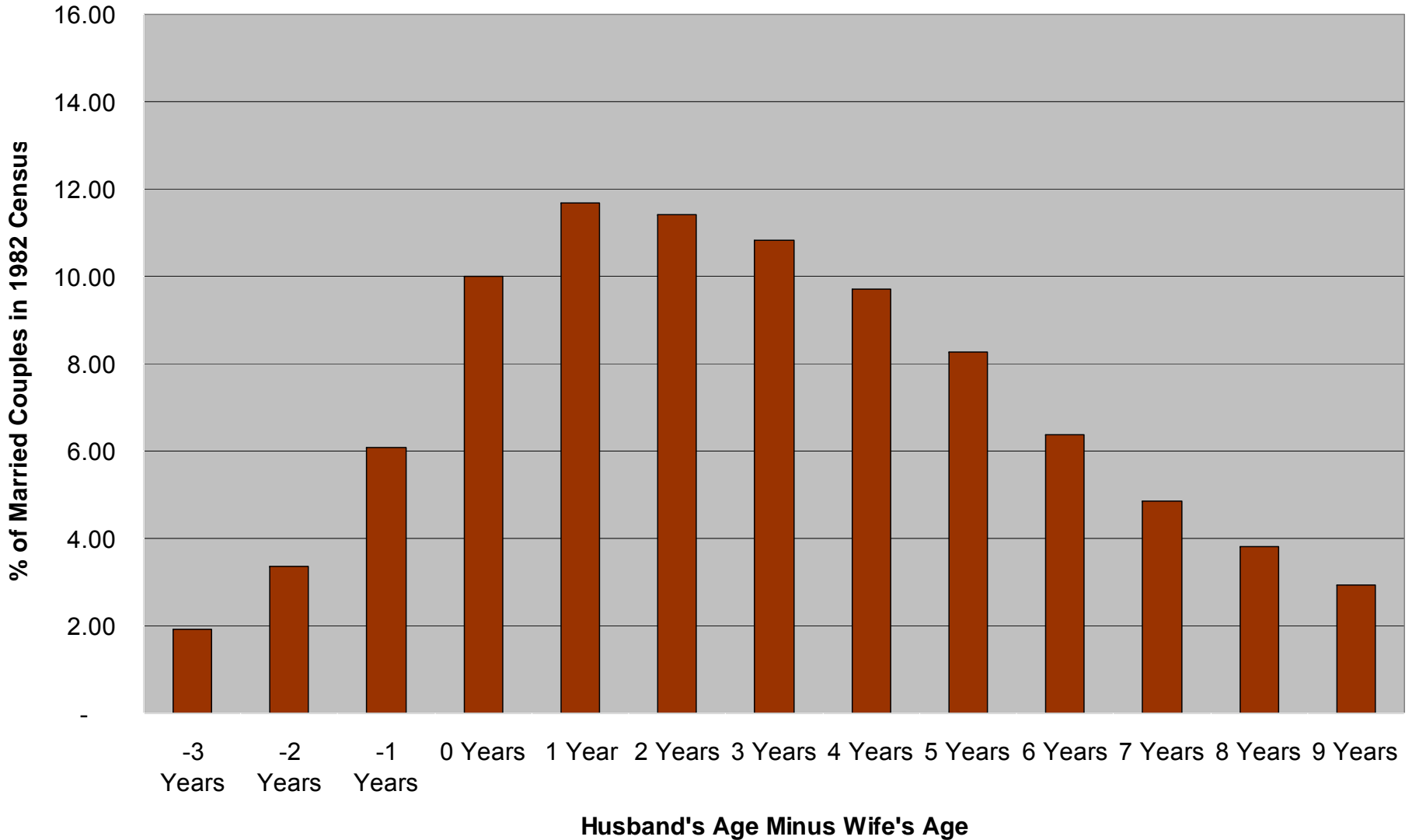
Purpose of this study:

- **To estimate the effects of marriage market conditions of adult children on ties to their elderly parents**

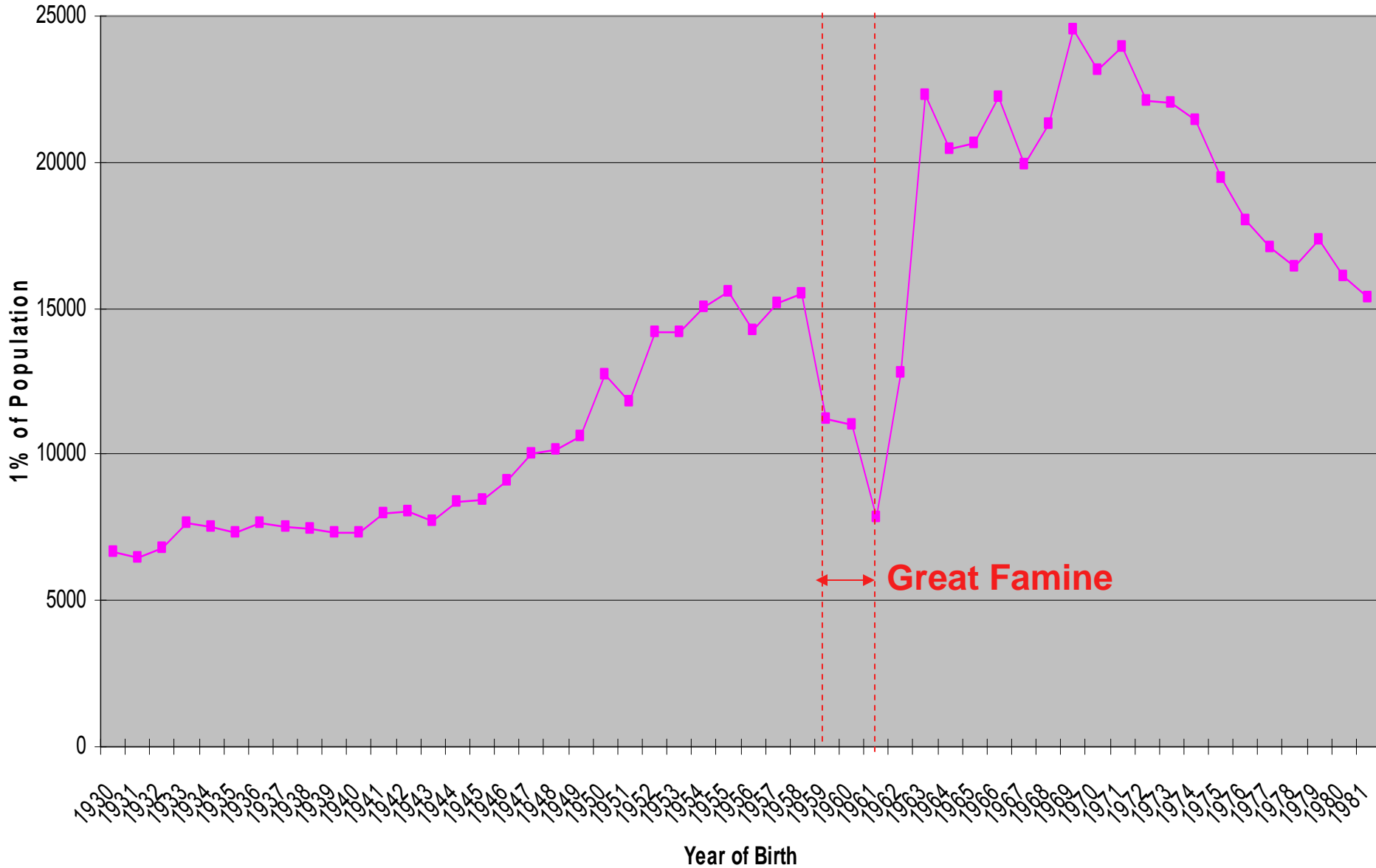
Age Differences of Rural Spouses: Most Women Marry Older Men



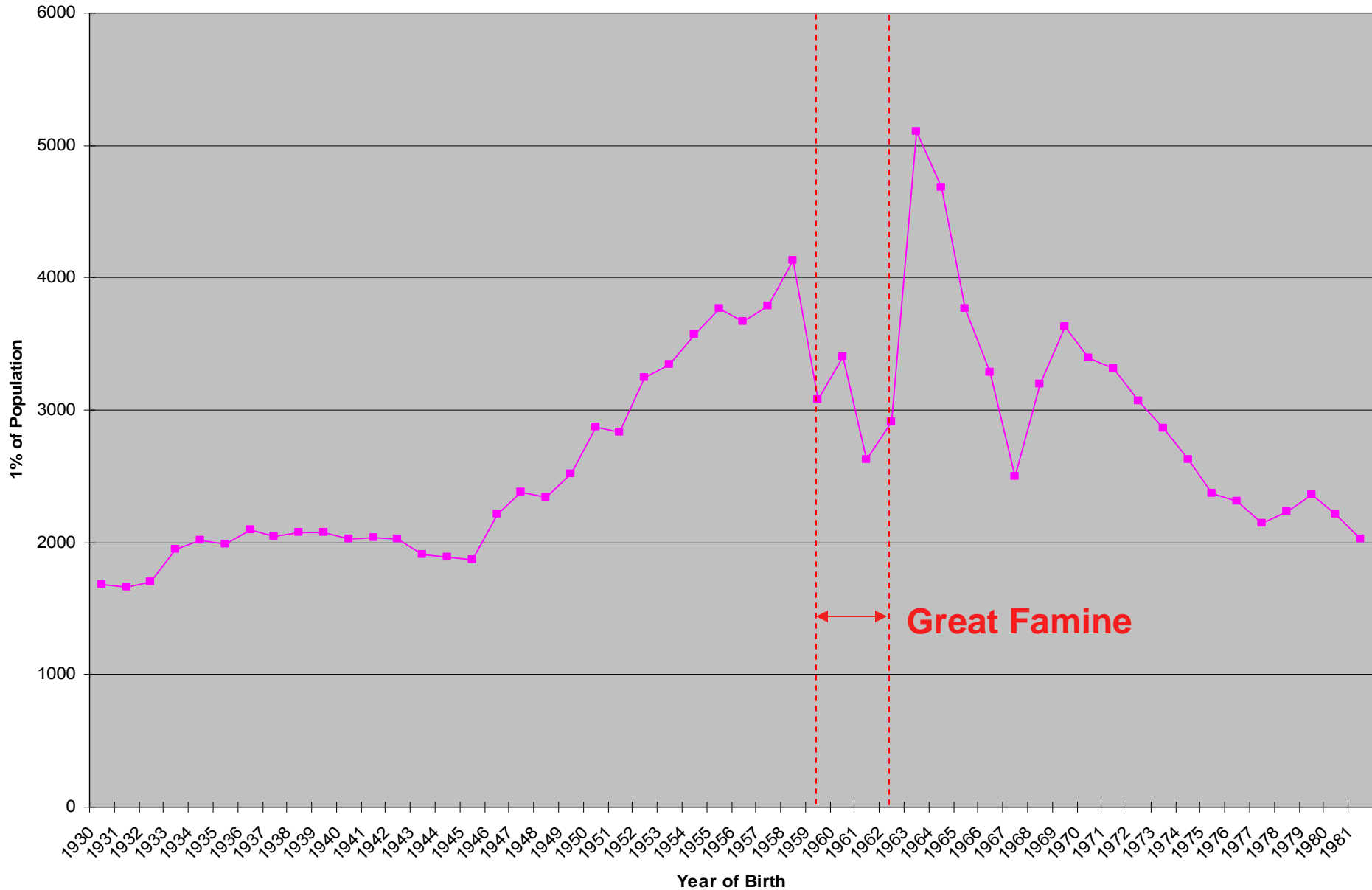
Age Differences of Urban Spouses: Most Women Marry Older Men



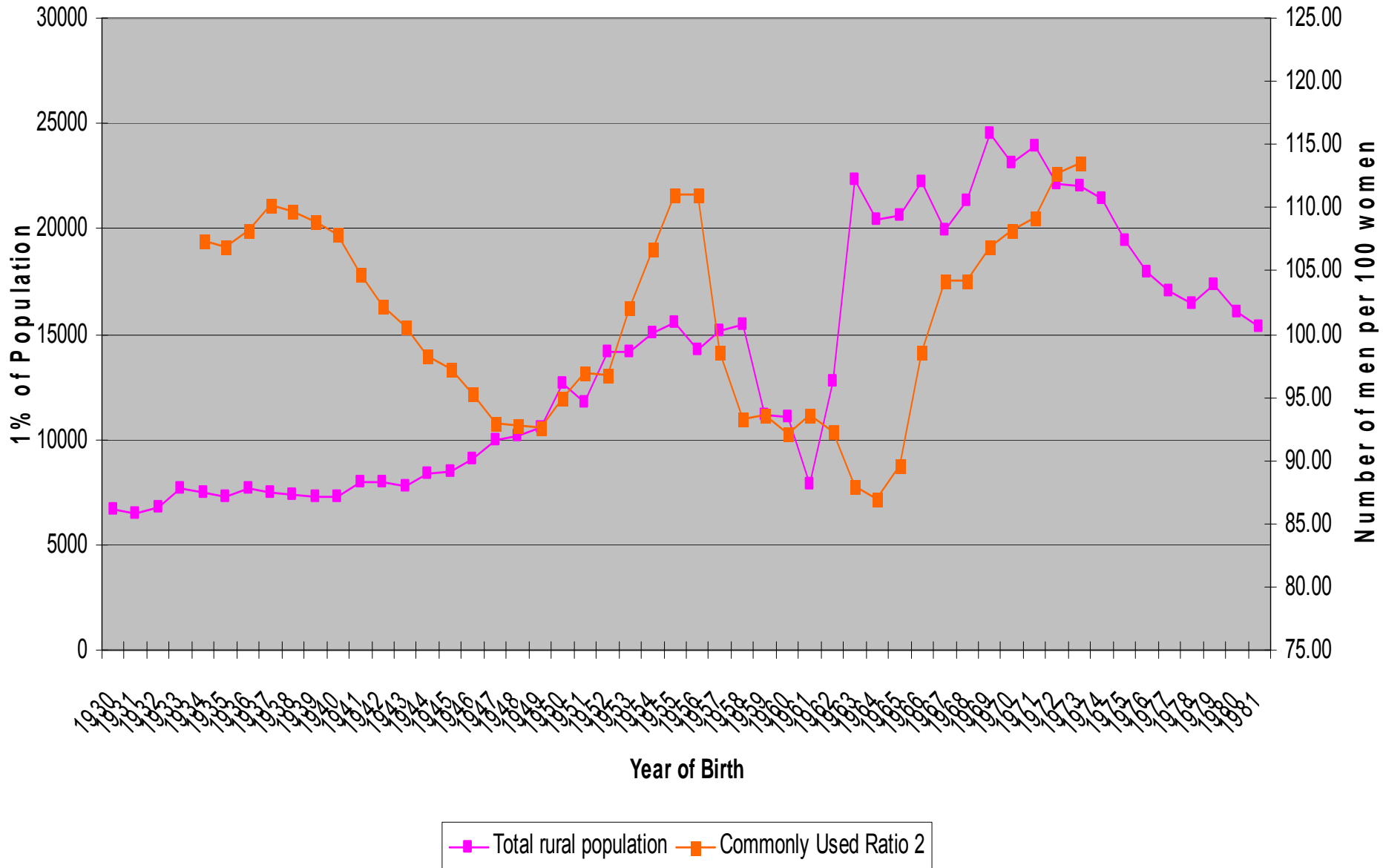
Fertility in Rural China



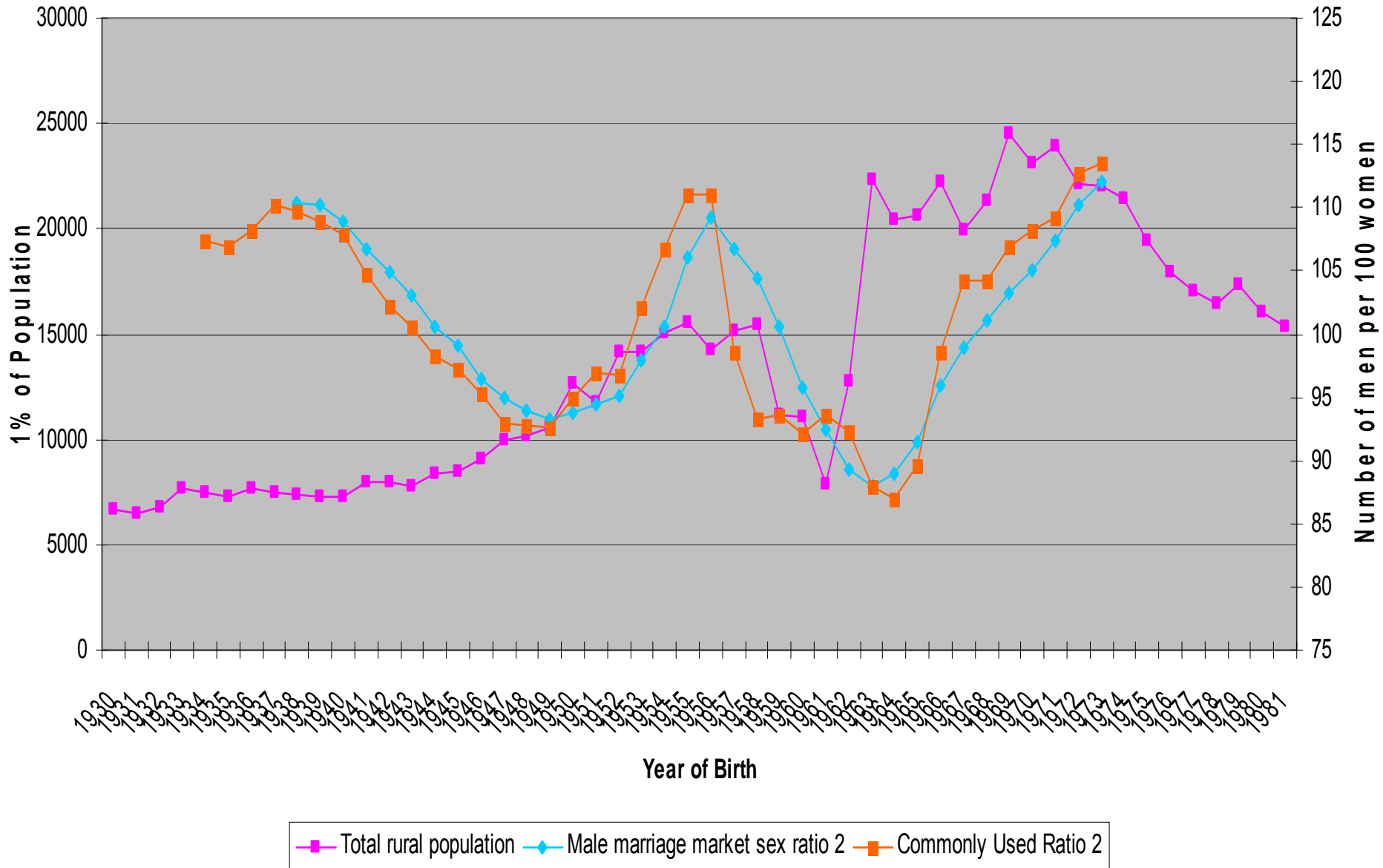
Fertility in Urban China



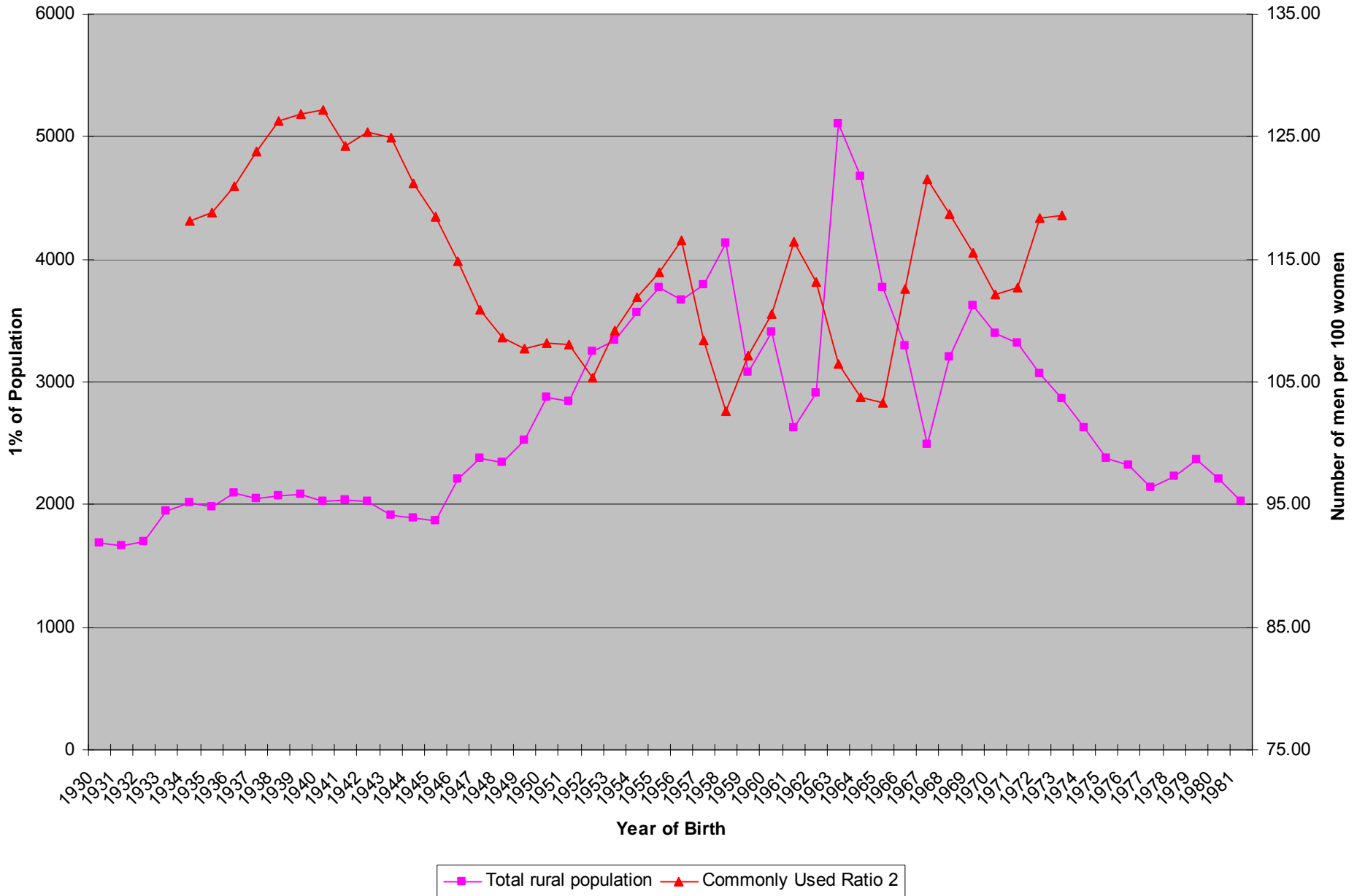
Commonly Used Sex Ratio (Rural Men)



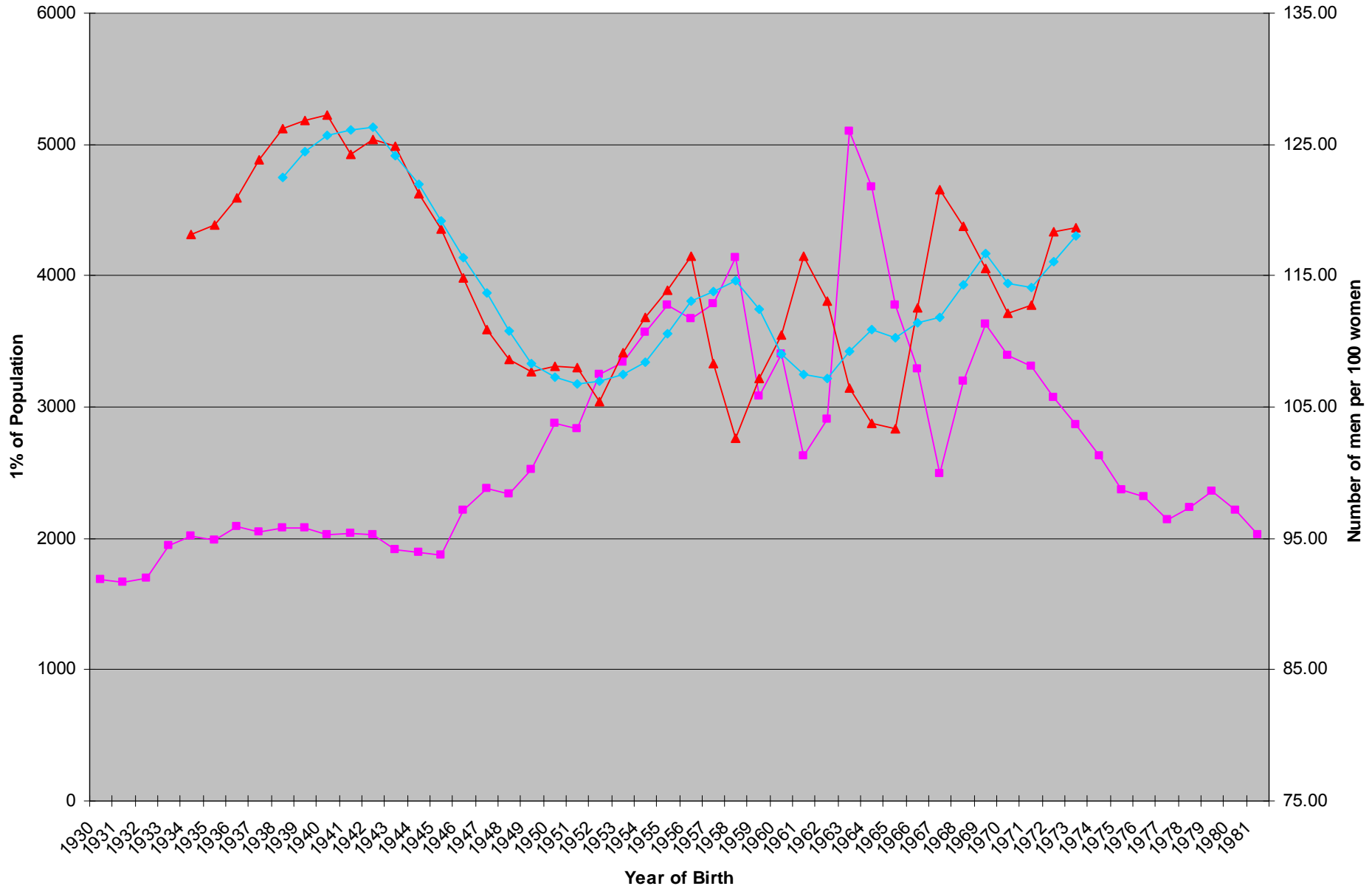
Sex Ratios Compared (Rural Men)



Commonly Used Sex Ratio (Urban Men)



Sex Ratios Compared (Urban Men)

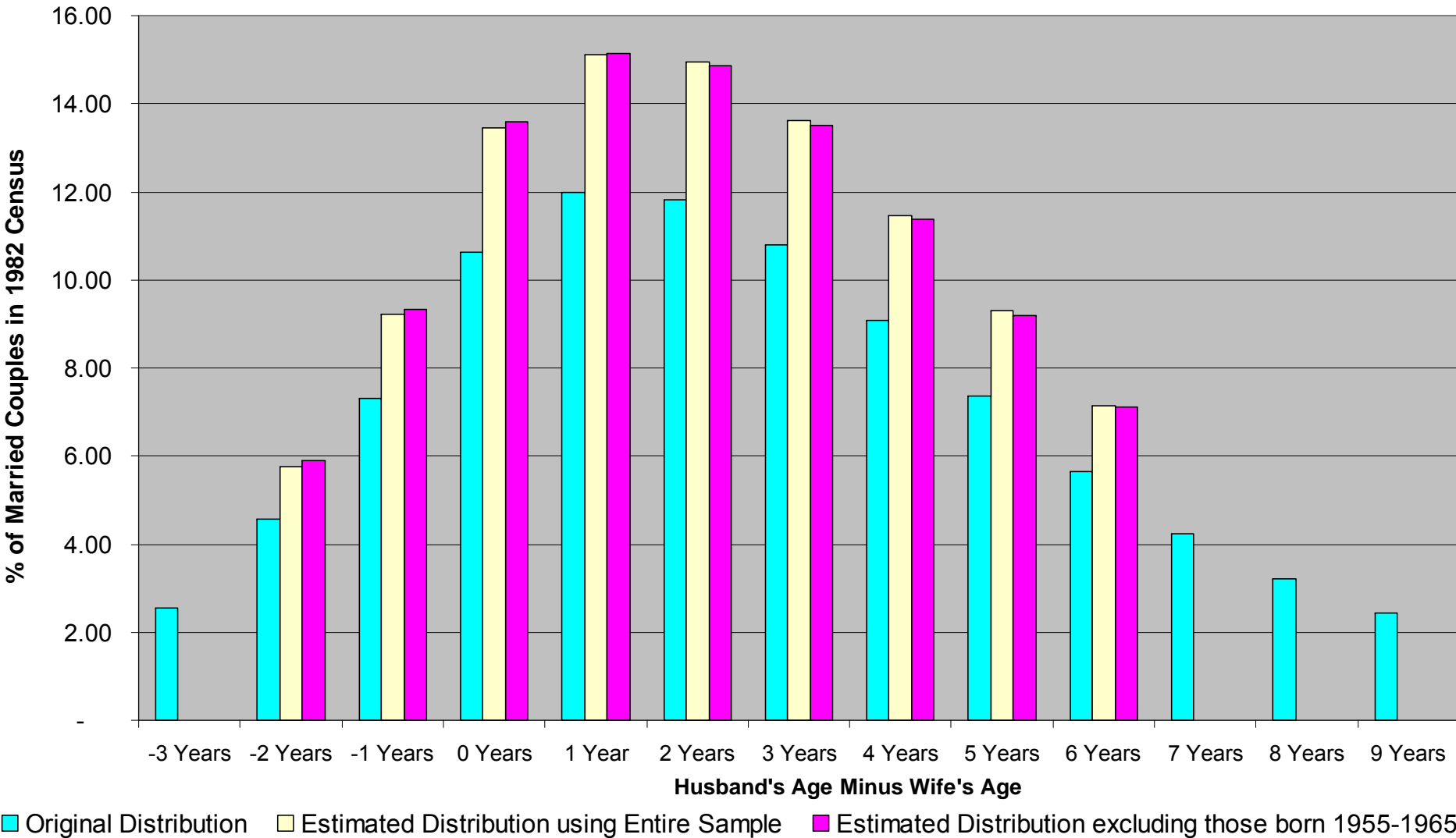


■ Total rural population
 ▲ Commonly Used Ratio 2
 ◆ Male marriage market sex ratio 2

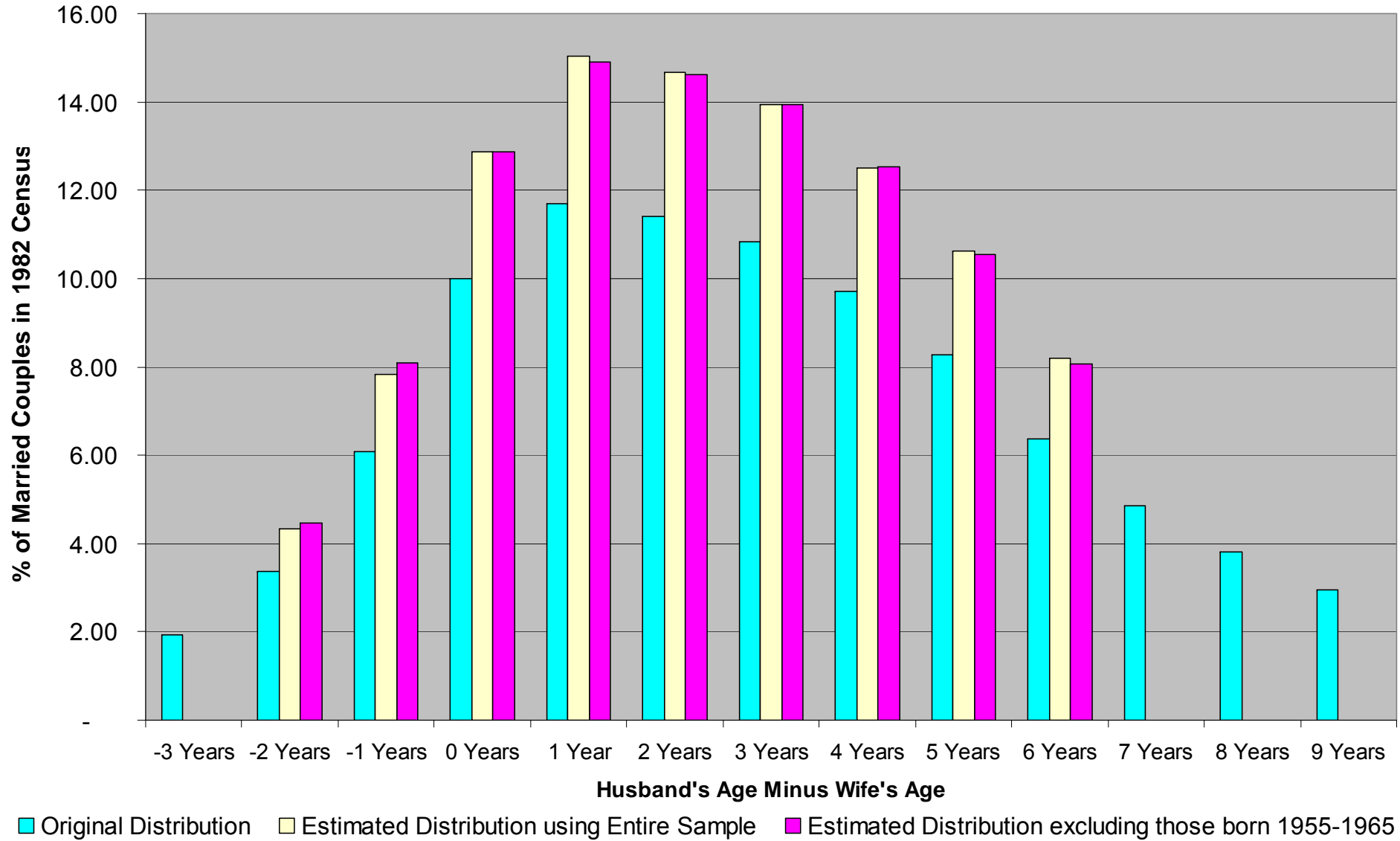
Preview of Findings

- Higher marriage market sex ratio implies:
 - Husband's parents are more likely to live in their own home (alone) and are less likely to live in home owned by their children
 - Son and daughter-in-law are less likely to be the primary care providers to elderly who are ill
 - Main financial source for husband's parents is more likely to be their own savings
 - Husband's parents are less likely to talk most frequently to him, but more likely to talk to his sister
 - Woman's mother-in-law does more household chores & transfers more income to her children

Age Differences among Rural Couples



Age Differences among Urban Couples



Urban & Rural Partners

Wife's Hukou	Husband's Hukou		
	Urban	Rural	Total
Urban	2,799	101	2,900
Rural	275	4,144	4,419
Total	3,074	4,245	7,319

Marriage Market Ratio:

Example for a Woman Born in 1960

Year Woman is Born	Year Potential Partner is Born	Year Competing Women are Born
1960	1954	1952-1960
	1955	1953-1961
	1956	1954-1962
	1957	1955-1963
	1958	1956-1964
	1959	1957-1965
	1960	1958-1966
	1961	1959-1967
	1962	1960-1968

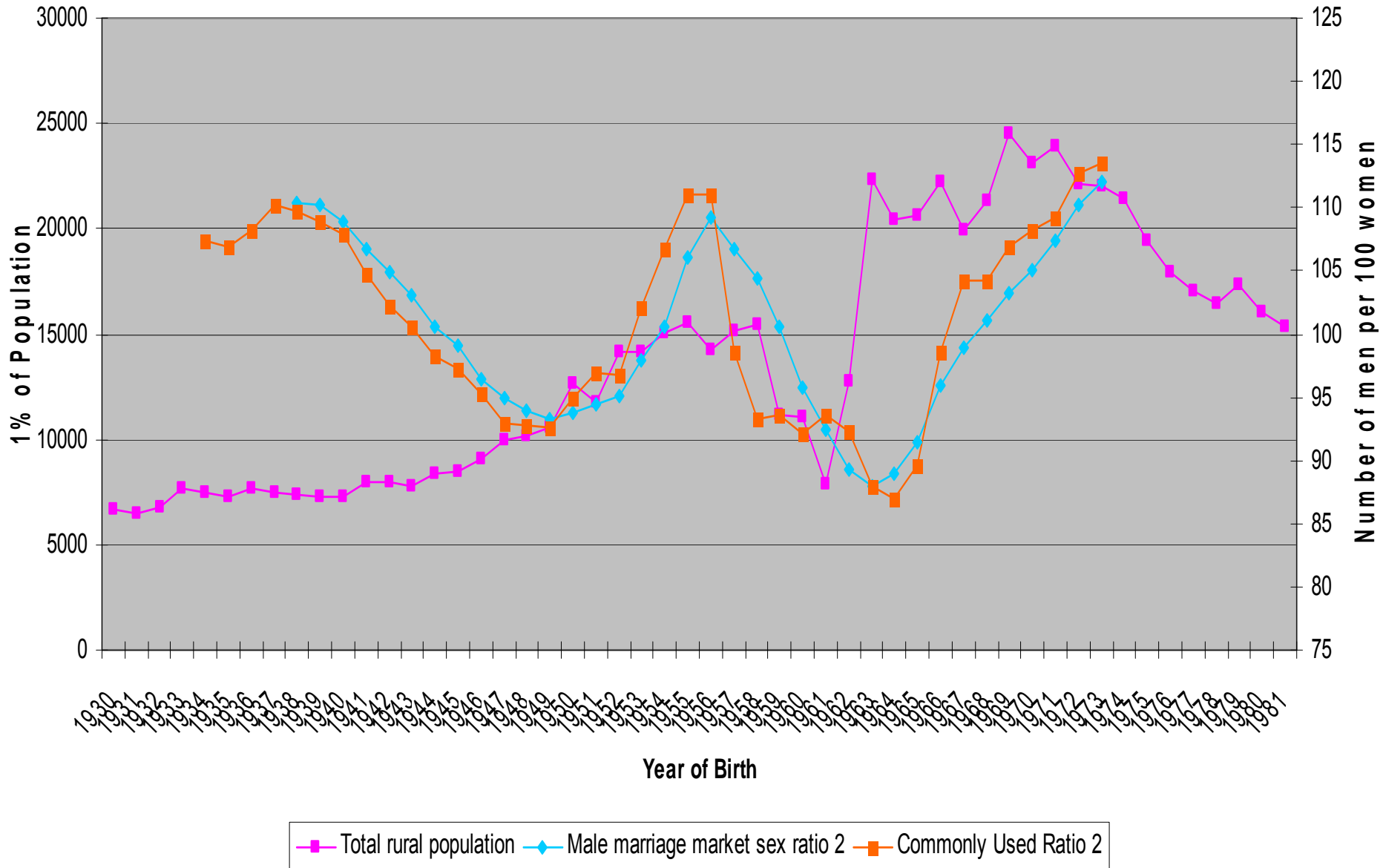
Marriage Market Ratio for a Woman of Age a

$$R_{f,a}^k = \frac{\sum_{i=-2}^6 p_i^k N_m^{k,a+i}}{\sum_{i=-2}^6 \left(p_i^k \cdot \sum_{j=-2}^6 p_{-j}^k N_f^{k,a-j+i} \right)}$$

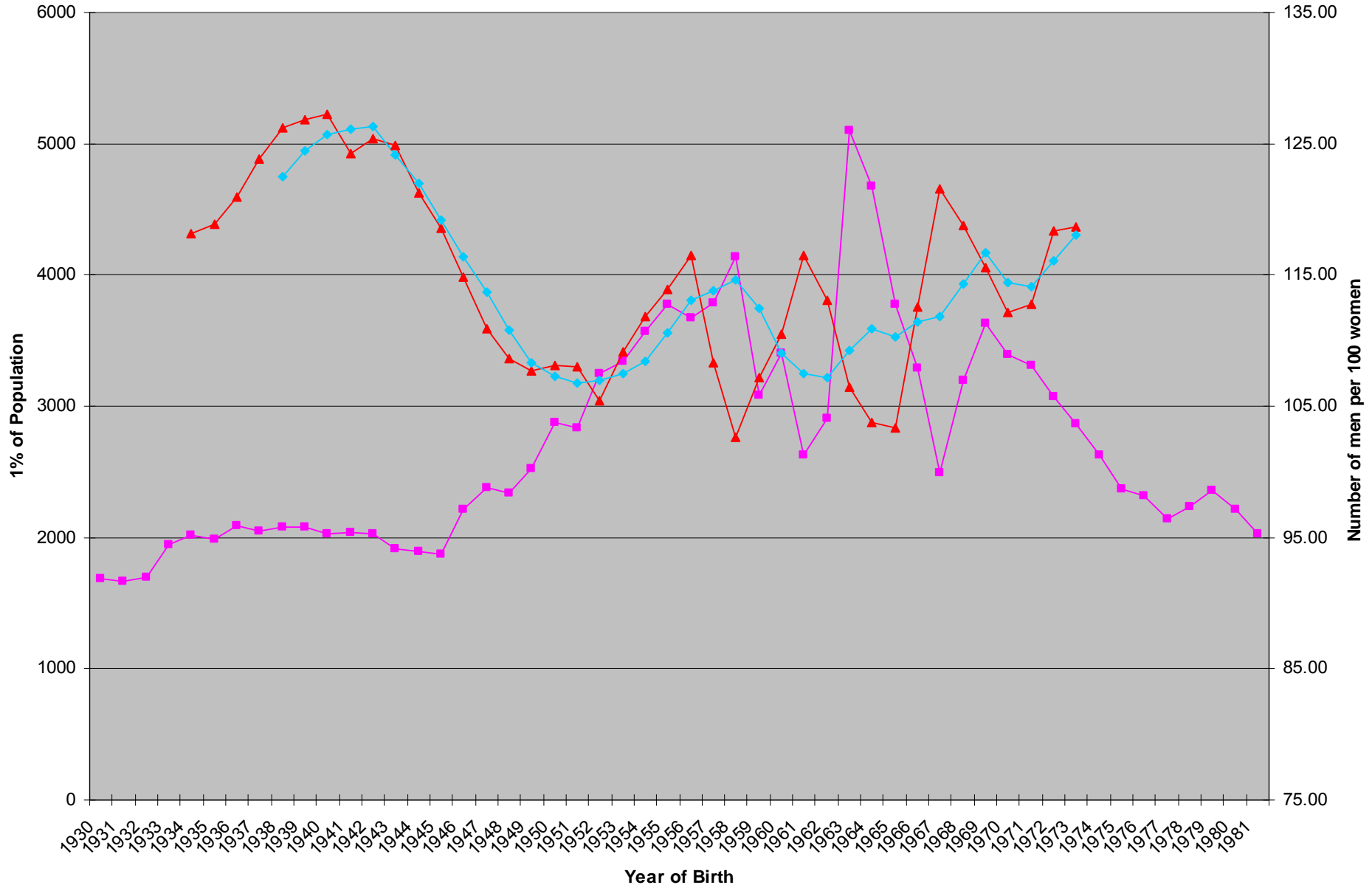
Proportion married to a man i years older
 Number of men aged $a+i$
 Number of women aged $a-j+i$



Sex Ratios Compared (Rural Men)



Sex Ratios Compared (Urban Men)



■ Total rural population
 ▲ Commonly Used Ratio 2
 ◆ Male marriage market sex ratio 2

Data

- Chinese Longitudinal Healthy Longevity Survey (CLHLS), Duke Aging Center
 - Oldest Old (80+) surveyed in 1998, 2000, 2002, 2005; 65+ added to survey in 2002
- Data on Fertility and Spousal Age Differences:
 - 1982 Population Census

CLHLS Provinces & GDP per Capita (in RMB¥)

GDP Per Capita
Mainland China
(2004)



Blue areas are
claimed but not
administered
by the People's
Republic of China.

Estimation

$$y_{if,a}^k = \beta_0 + \beta_1 R_{f,a}^k + \beta_2 X_{if} + \beta_3 P_i + \beta_4 \mu_a + \varepsilon_{if,a}^k$$

$y_{if,a}^k$: Outcome measures for daughter i in cohort a
(k indicates whether respondents are rural or urban)

$R_{f,a}^k$: Marriage Market Ratio faced by daughter of age a

X_{if} : Individual level controls
(household type, daughter's exposure level to famine)

P_i : Province of Birth Fixed Effects

μ_a : Year of Birth Fixed Effects

Living Arrangements of Elderly Parents

	<u>Coefficient on Marriage Market Sex Ratio</u>			
		Son		Daughter-in-law
Elderly lives in self-owned house	0.020** (0.010)	+2%	0.018** (0.008)	+1.8%
Elderly lives in house owned by child	-0.022** (0.009)	-2.2%	-0.015* (0.008)	-1.5%
Elderly parents live alone together	0.018** (0.008)	+1.8%	0.009 (0.008)	+0.9%

*** p<0.01, ** p<0.05, * p<0.1

Robust standard errors in parentheses, clustered by ratios.

Additional controls: province of birth and year of birth fixed effects, dummy for whether adult child is from a rural or urban household, average death rate (measure of famine exposure), number of men or women born in one's cohort, gender of elderly respondent.

Intergenerational Ties

	<u>Coefficient on Marriage Market Sex Ratio</u>			
		<u>Son</u>		<u>Daughter-in-law</u>
Primary Care Provider is Son or Daughter-in-law	-0.014** (0.007)	-1.39%	-0.017* (0.008)	-1.69%
Elderly's main financial source is own savings	0.027** (0.011)	+2.74%	0.029*** (0.011)	+2.94%
Elderly talks most frequently to son	-0.017* (0.009)	-1.69%	-0.016* (0.009)	-1.59%
Elderly talks most frequently to daughter	-0.013 (0.021)	-1.29%	0.052** (0.026)	+5.34%

*** p<0.01, ** p<0.05, * p<0.1

Robust standard errors in parentheses, clustered by ratios.

Additional controls: province of birth and year of birth fixed effects, dummy for whether adult child is from a rural or urban household, average death rate (measure of famine exposure), number of men or women born in one's cohort, gender of elderly respondent.

Intergenerational Transfers

	<u>Coefficient on Marriage Market Sex Ratio</u>			
	<u>Wife's Mother</u>		<u>Husband's Mother</u>	
	Female Ratio	Male Ratio	Female Ratio	Male Ratio
No. days Elderly Woman does Household Chores per Year for Adult Children	0.012 (0.246)	0.127 (0.081)	0.802* (0.464)	-0.003 (0.263)
Net transfers received from Mother or Mother-in-Law (net of transfers given)	-0.066 (3.377)	-0.299 (1.289)	6.151** (2.865)	-3.766 (3.709)

*** p<0.01, ** p<0.05, * p<0.1

Robust standard errors in parentheses, clustered by ratios.

Additional controls include: province of birth and year of birth fixed effects, dummy for whether adult child is from a rural or urban household, average death rate (measure of famine exposure), number of men or women born in one's cohort, gender of adult child respondent.

Summary of Findings

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