

Extended abstracts

A study of marriage squeeze in selected Asian countries

Introduction and Background

MARRIAGE is the legal union of males and females. When one reaches marriageable age, he/she, subconsciously or consciously enters the spousal supply and demand system in which selection of the appropriate spouse and marriage occur. The overall mate-selecting relationship of males and females eligible to marry is defined as the “marriage market.” As many demographic, biological, social and economic factors influence the nuptial behaviour, they can some times cause a squeeze on the marriage market and on the possible choices of people involved. Economists see marriage market disequilibria influencing the rewards and costs of marriage and thus the levels of marriage and patterns of assortative mating (e.g., Becker, 1981). The demographic dimension of this gender imbalance is commonly known as a marriage squeeze (e.g., Akers, 1967; Heer and Grossbard-Schechtman, 1981; Schoen, 1983). The term marriage squeeze was introduced by Glick *et al.* (1963) quoted by Glick (1988). It has also been termed as *marriage deprivation* and *marriage exclusion* (Zhigang *et al.*, 1967).

In the absence of large scale international migration there are two main demographic causes of imbalance in marriage market which are as follows:

- (1) Mortality transition (2) Fertility transition

Marriage squeeze can also be due to the some societal norms such as age gaps between spouses, remarriages of widowers and divorce men, and son preference up to some extent etc.

Akers (1967) made an attempt to measure the marriage squeeze of USA considering the situation of 1960s. He concludes that due to changes in marriage pattern there will be some impact on birth rate and the family formation. The study by Verma Shalini (2000) was based on the phenomenon marriage squeeze in India. In her study she gave a conclusion that India is passing through the male marriage squeeze. Shuzhuo Li (2005) did a study to lay down the focus on the implications of son preference on marriage squeeze in China. This study concludes that there will be large male marriage squeeze due to strong son preference from 2000 onwards in China.

There are various studies on marriage squeeze but no one study shows the implication of distorted sex ratio on marriage squeeze in the context of comparative study among Asian countries. Therefore for this study we have selected the countries India, China and Korea because various available literatures support that these countries have faced the fertility and mortality decline and in same time there is strong son preference in these countries.

Objective: The broad objective of the paper is to study the levels and trends of marriage squeeze in selected countries for the period 2000-2050.

In the present study we are assuming that age gap between spouses on an average is five years that is almost all males are getting married with five years younger females than themselves.

Methodology

Data sources: The data utilized in this study came from Demographic & Health Surveys, National Family Health Survey, and World Population Prospects 2008.

Methods: To study the marriage squeeze in future years we have used Software **Spectrum** to project the future population by age and sex taking base year (2000) population from World Population Prospects, 2008. The simplest approach for measuring the marriage squeeze is based on the calculation of simple sex ratio

$$I_1 = (M/F)*100$$

The drawback of this Index (I_1) is that it assumes all the population of a region have the same risk of getting married including children and elderly which is not possible in any society. Therefore let us consider that all marriages takes place within age range ($x, x + n$) then Index of marriage squeeze can be measured as

$$I_2 = ({}_nM_x / {}_nF_x)*100$$

But in most of the society it is seen that marriages are concentrated only over the few ages which is assumed as peak marriageable ages and known as prime marriageable ages (Akers, 1967). Let us consider that for males prime marriageable age is x to $x + m$ and for females it is y to $y + n$. Then Index of marriage squeeze can be represented as

$$I_3 = (mM_x / nF_y) * 100$$

In most of the society it is expected that grooms should be older than their brides. Due to this norm bride always belongs to younger cohort than groom. Thus for the purpose of Index of marriage squeeze it will more adoptable to calculate the sex ratio by assuming age gap between spouses is five years.

$$I_4 = ({}_5M_{x+5} / {}_5F_x) * 100$$

Discussion and conclusion

Table 1 describes about the sex ratio at birth (SRB, male birth per 100 female births) for selected Asian countries for the period 2000-2050. Table shows that in year 2000 China was facing highest male births (119 males per 100 females) as compared to India and Korea and expected to reduce up to 112, it can be just because of implementation of one child family norm in China. According to Sample Registration System (SRS) of India till 2010 India will have SRB as 111 males per 100 females and after this it is expected to reduce up to 107 approximately. Table also depicts that Korea will achieved almost stable SRB onwards 2000.

Table 2 describes the life expectancy at birth (LEB) during time period 2000-2050 in selected Asian countries by sex. LEB represents the sex differentials in mortality which is an important factor affecting marriage market. Table points out that all three countries have higher female LEB during 2000-50 than male. Also it is noticeable that LEB is increasing for both males and females simultaneously.

Table 3 presents the various sex ratio indices for measuring the marriage squeeze in selected Asian countries. In this table there are five sex ratio based indicators. For our study the most important indices for measuring marriage squeeze is forth and fifth index because it consider only the prime marriageable age for any population. By considering the overall sex ratio table 1 shows that there was balance situation in Korea in year 2000 whereas India and China was facing male dominance in society. But when we talk about the sex ratio indices in prime marriageable age, we found that in year 2000 it was almost balanced in India and Korea. Table also indicates that in 2025 Korea and China will face high male marriage squeeze and situation will be same as earlier for India. From the table we can also point out that there will be approximately 23 percent excess of males in China while it would be 15 for Korea till 2050 in prime marriageable age. In India situation will be little control in 2050 as it will face only 7-8 percent excess of males. Thus all selected three countries will face the high male marriage squeeze in 2050, only difference is of magnitude.

As some of the Asian countries have experienced rapid fertility decline and some have experienced skewed sex ratio at birth there are chances of marriage squeeze. But after the implementations of various health programmes for improving maternal and child health which will result in reduced infant and child mortality and also introduction of PNMT act will help to get natural sex ratio at birth. Thus in that context in the **Table 4** we are measuring various sex ratio indices as table 3 with assumption that sex ratio at birth will remain constant (as 105 males per 100 females) during period 2000-2050. Table shows that Korea was the only among selected countries which has already faced the over all balanced sex ratio in 2000. Table also depicts that China has shown the highest excess of males (13 percent) in year 2000 in prime marriageable age. From table we can also point out that if sex ratio at birth will be constant during 2000-2050 India will achieve almost balanced sex ratio but China and Korea still will face approximately 10 and 14 percent excess of males by 2050 respectively.

Thus on the basis of the presented paper we can conclude that China and Korea will face high male marriage squeeze either the sex ratio improve from 2000 to 2050 or constant as 105 during period 2000-2050. From both table we can also conclude that situation of marriage market will improve little bit when sex ratio at birth will be constant during 2000-2050 in all selected countries.

Important References:

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 Verma, S., 2000. Marriage Scenario of India with special reference to Marriage squeeze. *Ph.D. Thesis*, International institute for Population Sciences, Mumbai, India.
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Table (1) : Sex ratio at birth (males per 100 females) present and projected future levels for the period 2000-2050.

Year	Countries		
	India	China	Korea
2000	108.6	119.1	108.5
2005	107.3	119.9	109.6
2010	107.3	118.8	109.6
2015	107.3	117.9	109.7
2020	107.3	117.0	109.7
2025	107.3	116.1	109.7
2030	107.2	115.2	109.8
2035	107.3	114.4	109.8
2040	107.3	113.5	109.9
2045	107.3	112.7	109.9
2050	107.3	111.9	110.0

Table (2) : Sex differentials in Life Expectancy at Birth (in years) in present and projected future levels for the selected Asian countries for the period 2000-2050.

Countries/Year	2000-2005	2020-2025	2045-2050
India			
Male	60.9	66.4	71.4
Female	63.3	70.0	75.4
China			
Male	70.5	74.0	77.4
Female	73.7	77.8	81.3
Korea			
Male	73.9	77.8	80.5
Female	80.9	84.4	87.2

Table (3): Sex Ratios (males per 100 females) of total population in marriageable ages in some selected Asian countries for period 2000-2050

Sex Ratio Indices	Countries		
	India	China	Korea
2000			
Total M/F	107.6	107.4	99.2
Total M(15-49)/F(15-49)	109.1	106.2	102.6
Total M (15-54)/F (15-54)	108.8	106.4	102.4
Total M (20-34)/F (15-29)	97.0	113.7	107.7
Total M (25-39)/F (25-39)	96.8	108.5	105.6
2025			
Total M/F	106.0	108.3	99.7
Total M(15-49)/F(15-49)	107.6	112.7	108.1
Total M (15-54)/F (15-54)	107.4	111.4	106.3
Total M (20-34)/F (15-29)	106.9	126.3	126.6
Total M (25-39)/F (25-39)	107.4	130.4	118.7
2050			
Total M/F	104.0	107.9	98.7
Total M(15-49)/F(15-49)	106.2	116.3	108.9
Total M (15-54)/F (15-54)	106.1	116.2	108.4
Total M (20-34)/F (15-29)	108.7	122.4	118.6
Total M (25-39)/F (25-39)	106.9	123.2	115.8

Data sources: World Population Prospects 2008

Table (4): Sex Ratios (males per 100 females) of total population in marriageable ages in some selected Asian countries for period 2000-2050 keeping SRB constant as 105.

Sex Ratio Indices	Countries		
	India	China	Korea
2000			
Total M/F	107.6	107.4	99.2
Total M(15-49)/F(15-49)	109.1	106.2	102.6
Total M (15-54)/F (15-54)	108.8	102.4	102.4
Total M (20-34)/F (15-29)	97.0	113.7	107.7
Total M (25-39)/F (25-39)	96.8	108.5	105.6
2025			
Total M/F	104.8	104.5	98.8
Total M(15-49)/F(15-49)	106.7	109.1	107.1
Total M (15-54)/F (15-54)	106.6	108.2	105.4
Total M (20-34)/F (15-29)	105.4	118.4	124.2
Total M (25-39)/F (25-39)	106.9	127.5	118.0
2050			
Total M/F	102.0	102.3	97.2
Total M(15-49)/F(15-49)	103.3	104.2	105.0
Total M (15-54)/F (15-54)	103.5	105.7	105.1
Total M (20-34)/F (15-29)	105.3	109.4	114.1
Total M (25-39)/F (25-39)	103.6	109.7	111.4

Data sources: World Population Prospects 2008