Fertility decline and change in women's status in Iran

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Abstract

Iran has experienced main stages of demographic transition. The fertility and mortality rates dropped markedly and the country has a relatively low population growth rate now. Along with these changes and due to socio-economic development, the status of women has improved considerably. Using data from the country censuses (mainly from 1966 onwards) and other sources, this paper aims to examine the relationship between changes in women's status and the fertility decline. Findings show that in spite of marked improvements in some aspects of women's life, the above-mentioned relationship is not as strong as it might be expected. The literacy rate for the women, for example, improved sharply during the last decades but their participation in labor force has not shown any improvement. At the same time, the country has achieved a fertility rate near to the replacement level. Cultural factors might have played the main roles in this regard.

Keywords: Fertility transition, women's status, fertility, education, labor force participation, demographic transition, gender stratification

Introduction

Like other developing countries, Iran has experienced a sharp decline in fertility during last decades. Total fertility rate for women dropped from 5.9 in 1976 to 2.2 in 2000 (Abbasi-Shavazi and McDonald 2005). Although the decline was in accordance with a global decline in fertility in many developing countries, its higher speed should have been due to tremendous socio-economic changes and would have important consequences in terms of socio, economic and cultural factors. Among factors affecting the decline, changes in women's position in the family and society are the most important things that this paper is going to deal with.

The status of women in the country has improved markedly during the last decades. The literacy rate of women aged 6 years and over increased sharply from 14.9 in 1956 to 74.2 in 1996 (Mehryar and Tajdini 1998). This increase was recently accompanied with a stronger presence of women in universities. The proportion of female students in universities has increased sharply from about 0.30 in 1994 to about 0.50 in 2001 (Institute of Research and Planning for Higher Education 2002). Participation of women in labor force, however, has not considerable change during the recent decades. The rate of women's participation in labor force had a drop from 12.7 in 1966 to 9.3 in 1996 (Table 2).

The discrepancies between the factors which might reasonably have effects on fertility and fertility changes need more investigations. Using data from the country

censuses (since 1976) and other sources, this paper aims to find the interrelationship between changes in women's status and the fertility decline in Iran.

Fertility change and women's status

Fertility decline as a part of a larger process called 'demographic transition' motivated many scholars to explain the decline by identifying its causes. These efforts have accumulated a body of knowledge called the 'theory of demographic transition'. Notestein (1945, 1953), who is one of the first theorists in this field, argues that in the time of high mortality, fertility is kept high by social supporters such as marriage and family customs. In industrial society, the economic importance of traditional family weakens, and opportunities for women outside of the home expand. The occurrence of industrialization and modernization is core to this theory. Therefore, in an industrial society, the status of women (through education and labor force participation) will improve and eventually a low level of fertility is resulted.

There were some critiques on the principle version of the demographic transition theory, since the experiences in fertility decline have not matched with the propositions offered by the theory. As Freedman (1979, 1982) showed, in Indonesia the progress of family planning programs was stronger than other development sectors. In Taiwan, fertility fell without any changes in the traditional form of family or in attitudes towards the status of women. Economic growth alone, however, is insufficient to explain the decline. Countries like Sri Lanka and Jamaica have experienced declines in fertility in periods of poor economic performances (Lucas 1994:25).

The literature on gender systems suggests the higher degree of gender stratification within families or kinship systems is associated with a larger desired number of children. A higher degree of gender stratification can be seen in lineal and patriarchal families. The importance of labor, the distribution of the burden of caring for large numbers of descendents across the lineage, women's needs to their children's support, and sharing wealth within the lineage (rather than investing on their own children), could lead to such a demand (Mason 2001:162-63). Although a high level of fertility is associated with gender stratification in lineal and patriarchal families, it does not mean that the stratification is the only factor explaining the higher fertility. In many gender-stratified settings, differences in fertility desire between men and women were small. Also, the willingness of women for having more children for their supports is seen in many developing regions (Mason 2001:163-64). Thus, other conditions my require women to have more or less children in different circumstances.

As Mason (2001) noted, the effect of gender systems on proximate determinates of fertility is through three factors: the demand for children, the supply of children and the cost of fertility control. Women with a high level of education and job outside home normally have fewer children. When education provides women with opportunities for work, the relationship between education and fertility tends to be negative. The relationship between fertility and employment is only significant for jobs outside the home. Industrialization may decrease the age at marriage (because with an industrial employment, young people should not be waiting for inheritance since they can find appropriate jobs) and can lessen some practices for birth spacing (like postpartum abstinence). These could increase the level of fertility.

Regarding the costs of fertility control, women's freedom of movement, awareness, and control of resources, can positively affect their learning about contraception, and their ability to seek out contraceptives and afford their costs. Non-

lineal and non-patriarchal family systems can reduce the costs of fertility regulation. Although changes in family system in Bangladesh were not considerable, contraceptive use has been adopted rapidly (Mason 2001:168-9). It can be concluded that family system is not the main factor in fertility transition. The effect of family system was through other factors and societies with different family systems have experienced fertility transition simultaneously.

The indirect effect of gender system on fertility was showed by many studies. Some of them which are more relevant to this paper are brought here. Sajeda Amin (1998) in a study of women's lives and fertility decline showed the continuity of gender inequality may not prevent the occurrence of demographic transition. The relationship between gender system and fertility is more effective on the cost of fertility regulation. In a study of fertility decline in Turkey, Angin and Shorter (1998) showed that the fertility decline in Turkey was due to changes in structural conditions, not the improvement of women's status. Use of contraceptives was not an indicator of men's or women's power. To use contraceptives, women relied on men and were very concerned about the side effects of the methods. Women preferred using male methods.

In a study of status of women and fertility in Iran, Aghajanian (1992) showed the importance of family formation in fertility. The effects of factors relating to women's status, like relative access to education, employment and health, were through early family formation. In studies of fertility decline in Iran, Abbasi-Shavazi et al. (2003) and Abbasi-Shavazi and McDonald (2005) have attributed the decline to the improvements made to some aspects of Iranian women's life.

Data and methodology

There are different sets of data. Main data are from the country censuses: 1966, 1976, 1986 and 1996. In addition to these sources, data from the survey of 'social and economic characteristics of households in Iran', conducted by the Statistical Center of Iran in 2001, are used. Using these data, the relationship of the status of women and fertility changes is examined. Changes in the characteristics of women are examined in comparison with the changes for men in order to get an understanding of gender equality.

Women's status

Status of women can be examined using different factors. Social, economic and demographic characteristics are the most important ones in describing the situation of women in a society. Table 1 shows the level of education for women and men aged 6 years and older during 1966-2000. As can be shown, the level of education for both sexes improved markedly during the period, although the improvement for women was higher. The distribution of people across different level of education in 2000 and the improvement in education for both sexes during the reference period were nearly the same, although women had a lower level of education than men.

Activity ratios for women and men aged 10 years and over are shown in Table 2. The ratios for men dropped from 77 in 1966 to about 61 in 1996, with about 20% decline. This decrease was mostly due to increases in ages at which the activity was begun. The ratios for women had an upward and downward trend, an increase during 1966-76 and a decrease during 1976-96. The gap between men and women labor force participation has not changed very during the reference period. As with

education, there is no improvement in gender stratification in terms of the participation in outside home activities.

Table 1. Percent distribution of women and men aged 6* years and older, by the level of education, Iran, 1966-2000.

Level of education	1966		1976		1986		1996		2000	
	W	M	W	M	W	M	W	M	W	M
Unofficial education	**4**	13	**3**	7	**7**	5	**9**	6	**6**	2
Primary	**74**	66	**63**	57	**56**	52	**42**	41	**38**	36
Lower secondary	**12**	10	**16**	16	**19**	17	**23**	25	**23**	27
Upper secondary	**8**	8	**13**	13	**16**	21	**21**	21	**27**	27
Higher education	**1**	2	**3**	4	**2**	4	**5**	7	**6**	8
Other**	**0**	0	**3**	2	**0**	1	**0**	0	**0**	0
Total	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**
% illiterate	**80**	57	**64**	40	**47**	28	**26**	15	**20**	13

***** 7 years and older in 1966
****** Technical and vocational training in 1976 and theology and religious sciences in 1986 and 1996
Source: 1966, 1976, 1986 and 1996 Censuses; Ministry of Health and Medical Education et al. 2002

Table 2. Activity ratios for women and men aged 10 years and older, Iran, 1966-96.

Age	1966		1976		1986		1996	
	women	men	women	men	women	men	women	men
10-14	**14.2**	35.9	**12.7**	18.4	**4.5**	12.8	**3.0**	5.1
15-19	**15.5**	68.0	**17.2**	53.3	**9.5**	53.7	**8.8**	34.5
20-24	**14.2**	90.8	**18.4**	86.4	**12.1**	87.8	**13.4**	73.7
25-29	**12.7**	96.6	**16.3**	95.7	**11.2**	94.8	**14.3**	90.2
30-34	**12.1**	97.7	**14.2**	97.8	**11.1**	95.9	**13.0**	95.0
35-39	**12.3**	97.9	**12.8**	98.4	**9.5**	96.9	**13.2**	95.8
40-44	**12.5**	97.5	**11.8**	97.7	**7.8**	96.2	**13.0**	95.0
45-49	**12.1**	95.9	**11.0**	96.0	**6.3**	94.3	**10.0**	92.6
50-54	**10.8**	91.2	**9.5**	92.4	**5.5**	91.5	**7.2**	85.8
55-59	**8.8**	86.4	**8.3**	86.3	**5.1**	86.9	**5.5**	81.1
60-64	**7.6**	74.1	**6.8**	77.0	**4.4**	79.8	**4.5**	73.2
65+	**4.5**	46.8	**4.7**	56.4	**2.9**	56.9	**2.7**	54.2
Total	**12.5**	**77.0**	**13.6**	**70.7**	**8.2**	**69.2**	**9.2**	**60.7**
Total*	**12.7**	76.4	**13.5**	71.0	**8.1**	69.6	**9.3**	60.5

***** Standardized according to age distribution
Source: 1966, 1976, 1986 and 1996 Censuses

Table 3 shows sex ratio of the population of Iran during 1966-96. The sex ratios were in favor of men in most ages. The trend of sex ratio over the reference period did not show any remarkable difference. With the improvement of health facilities and considering a higher life expectancy for women, the trend has not shown any advantages for women. Therefore, gender differences in survival nearly remained constant during the reference period.

Proportions of never married women and men aged 10-29 years (Table 4) had significant changes during the reference period. For women, the proportions increased

over the period and the sharpest increases were for age groups 20-24 and 25-29. Also, the increase during 1986-96 was higher than other periods. The trend for men was downward (during 1966-86) and upward (during 1986-96) and consequently no remarkable changes, in the proportions, took place during the reference period. Thus, the trends reflect a convergence of marriage behaviors of women to those of men.

Table 3. Sex ratio, Iran, 1966-96.

Age	1966	1976	1986	1996
0-4	108	108	103	105
5-9	108	108	104	104
10-14	112	110	107	104
15-19	96	102	105	101
20-24	89	92	101	97
25-29	83	92	102	101
30-34	107	97	102	102
35-39	117	103	97	104
40-44	127	116	101	104
45-49	132	118	107	97
50-54	100	122	115	101
55-59	109	129	99	110
60-64	106	107	122	120
65-69	120	110	117	115
70-74	109	103	104	121
75-79	125	127	95	113
80-84	104	115	88	102
85+	105	111	74	87

Source: 1966, 1976, 1986 and 1996 Censuses

Table 4. Proportions never married for women and men aged 10-29 years, Iran, 1966-1996.

Age	1966		1976		1986		1996	
	W	**M**	**W**	**M**	**W**	**M**	**W**	**M**
10-14	**0.98**	100.0	**100.0**	100.0	**0.97**	100.0	**0.97**	100.0
15-19	**0.54**	0.96	**0.66**	0.94	**0.66**	0.93	**0.81**	0.97
20-24	**0.13**	0.69	**0.21**	0.61	**0.26**	0.59	**0.39**	0.72
25-29	**0.04**	0.27	**0.07**	0.22	**0.09**	0.18	**0.15**	0.27

Source: 1966, 1976, 1986 and 1996 Censuses

Fertility levels

Fertility levels in the country have changed dramatically during last decades. Table 5 shows total fertility rates for the country during 1972-2000. As shown, fertility had an increase during 1972-80. This increase was to a high extent due to Islamic revolution. One of the reasons for this increase was the effect of religion (after revolution) on the decline in the age at marriage (Aghajanian 1991). The decline in proportions never married for men and leveling off the proportions for women during 1966-86 (Table 4) can support this reason. Then, fertility has dropped, with a sharper decline during 1986-2000. The trends for the factors showing the status of women were not in accordance with the trend of fertility, although there were some associations between changes in proportions never married and women's labor force

participation with fertility changes. Since activity ratios for women were very low (only about 10 per cent), the association cannot be of use. So, other factors may be in effect for fertility changes during the reference period.

Table 5. Total fertility rates, Iran, 1972-2000.

Year	TFR	Year	TFR
1972	5.9	**1987**	5.8
1973	5.9	**1988**	5.5
1974	6.0	**1989**	5.3
1975	5.7	**1990**	5.3
1976	6.1	**1991**	4.9
1977	6.1	**1992**	4.3
1978	6.2	**1993**	3.8
1979	6.6	**1994**	3.4
1980	7.0	**1995**	2.9
1981	6.8	**1996**	2.5
1982	6.1	**1997**	2.6
1983	6.3	**1998**	2.4
1984	6.6	**1999**	2.3
1985	6.4	**2000**	2.2
1986	6.2		

Source: Abbasi-Shavazi and McDonald 2005

Children ever born

To have a better understanding of the relation between fertility and women's status, mean number of children ever born was calculated according to some selected variables showing women's status and gender equality. Table 6 shows mean number of children ever born according to some selected variables. For generational differences, women are divided in two groups: 15-29 years (younger generations) and 30-49 years (older generations).

Regarding education, there was a negative association between mean number of children and educational level. This was applicable for both groups of women. The data reflected stronger effect of education on fertility. Relation to husband can show women's authority to spouse selection, since having a husband from close relatives means the marriage is arranged. Women in older generations were more likely to have non-relative husbands and the relation between fertility and this variable, being a close relative to husband was associated with a higher level of fertility, for them was more meaningful than for their younger counterparts. The difference in fertility between those who had a husband from relatives and those from non-relatives, among younger generations was not sharp. The proportion of those who had a self-selected spouse among younger generations was more than of that among older generation. This can be a sign for women empowerment. Those who had used their parents' advice had a higher level of fertility. As with the variable relation to husband, the differences in fertility between those whose husband were self-selected and the others were lower for younger generations than older ones.

Two variables 'couple educational difference' and 'couple age difference' can measure the improvement of women's status and gender equity. The difference in education between couples among younger generations, compared to older ones, was more in favor of women. Among older generation, differences in favor of women were associated with a higher level of fertility. The differences in fertility between the

categories for younger generations were so small. Regarding the age, differences in favor of men are higher among younger generations. For more than 92% of younger couples, husband was older than wife. This can reflect a divergence from gender equity in terms of age. The relation between fertility and the age difference was not straightforward and an easy conclusion cannot be drawn.

The small differences in fertility across different categories of variables shown in Table 5 for younger generations can reflect the importance of other factors. This could be partly due to a low level of fertility for these women.

Table 6. Mean number of children ever born for women aged 15-29 and 30-49 years, by selected variables, Iran, 2001.

Variables	15-29 years		30-49 years	
	Mean	**N**	**Mean**	**N**
Education				
Illiterate	2.7	**178**	6.0	**1163**
Primary	1.9	**172**	4.4	**334**
Completed primary	1.8	**294**	3.9	**404**
Lower secondary	1.7	**167**	3.4	**173**
Completed L. secondary	1.5	**191**	3.2	**260**
Upper secondary	1.4	**106**	2.9	**131**
Completed U. secondary	1.3	**224**	2.5	**160**
Associate degree	1.3	**16**	2.3	**68**
Other Uni. degree	1.1	**37**	2.1	**114**
Relation to husband				
Close relative	1.8	**341**	4.8	**677**
Other relative	2.0	**308**	4.6	**697**
Non-relative	1.7	**798**	4.1	**1984**
Spouse selection (advice of)				
Parents	2.0	**609**	4.9	**1848**
Close relatives	1.7	**71**	3.6	**193**
Other relatives	1.5	**51**	3.6	**154**
Friends	1.4	**14**	2.9	**52**
myself	1.6	**700**	3.7	**1108**
Couple educational difference				
Woman higher-man lower	1.6	**286**	2.9	**321**
Same	1.6	**342**	3.2	**629**
Woman lower-man higher	1.7	**392**	3.3	**735**
Couple age difference				
Wife older	1.8	**50**	3.9	**347**
Same	1.5	**45**	4.2	**153**
1-4 years	1.9	**393**	4.1	**975**
5-8 years	1.7	**510**	4.4	**918**
9 years and more	2.0	**270**	4.9	**688**
Total	**1.8**	**1447**	**4.3**	**3362**

Summary and conclusion

Using the data from the country censuses and other sources, this paper was to make a relationship between fertility decline and changes in women's status. Position of women in the society has improved mainly through educational attainment. This attainment, in contrast, prevented women to marry at very younger ages. No remarkable improvement was taken place in terms of women's labor participation.

The improvement of education was also applicable for men. These changes, however, could not smooth the pace toward gender equality and gender stratification in some aspects, like labor force participation, is remained.

At the same time, the country has experienced a sharp decline in fertility. A positive association between fertility decline and improvement of women's status is thought and radical changes in women's lives should have preceded the sharp decline. The data presented here do not support such a proposition and the association between the decline and women's empowerment was true for some aspects of women's lives in Iran.

The changes in fertility, which are normally resulted from couple's decisions about ideal family size, should be attributed to some aspects of women's lives, which might not be relevant to socio-economic structure in terms of education, workforce, family formation etc. Relevant studies attributed the changes in fertility to motivations and aspirations the women could get through the social context which was in favor of them. A movement toward the equality of men and women within the family, that has also been enhanced by Islam (Abbasi-Shavazi 1995; Hoodfar 1995), the compatibility of government development and population policies with the improvement of women's status (Aghajanian 1998; Hoodfar 1996), and willingness of the women to empower their situation through educational promotions and having more important roles in decision-making within the family, could improve women's position in the society within the formal gender stratified socio-economic structure.

Strong motivations of women toward enhancing their position in gender stratified societal structures, can remind us of Caldwell's notion of emotional nucleation (Caldwell 1976). The precedence of emotional nucleation to economical nucleation in Caldwell's theory can be applied here. Women were emotionally and spiritually looking for complete gender equity and this had forced them to suppress their fertility below a normal level appropriate to the socio-economic structure. What remained for the society was to accommodate socially and economically these aspirations. If we consider women as a minority group (deprived from their rights), their intentions to have fewer children, can be interpreted in the light of minority group status (Mahmoudian 2000). From this point of view, the fertility suppression would be a mechanism through which women could improve their situation in an easier and better way.

The future of fertility change in Iran depends on women's status and their aspirations towards social, economic and cultural lives. If the society could accommodate the aspirations through more flexible socio-economic and gender stratifications, the fertility might be leveled off. If not, a further decline in fertility could be expected and implications of a below-replacement level of fertility would be on the way.

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