

RECENT CHANGES AND THE FUTURE OF FERTILITY IN IRAN

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This paper briefly reviews population policy changes and fertility trends over the last three decades, puts forward some possible explanations behind the fertility transition in Iran, and finally speculates about the future of fertility for the coming decades. Among the questions to be answered in this paper are: what are the recent changes of Iranian fertility? Will Iran follow the patterns experienced by the more developed countries and will attain fertility levels below replacement? If so, what are the leading factors explaining the fall of fertility in Iran? What are the likely and plausible assumptions for the future of Iranian fertility?

A. PERIOD FERTILITY RATES

1. Trends of total fertility rates: 1966-2000

The fertility transition in Iran has passed through different phases from 1972 to 2000 (figure 1). Despite the implementation in 1966 of the first family planning program, the changes in fertility were minimal during the late 1960s and early 1970s. Total fertility rate (TFR) decreased from around 7.7 in 1966 (Amani, 1970) to around 6.0 in 1976, and then rose to 7.0 in 1980. Despite the approval of the family planning methods by *Ayatollah Khomeini* in 1979, the pre-revolutionary family planning program suspended immediately after the revolution. Although, no specific population policy was introduced after the revolution, the new government adopted a pro-natalist approach. The legal minimum age at marriage for girls and boys was reduced to 9 and 12 years, respectively. The War with Iraq created a pro-natalist atmosphere by which families were encouraged to have more children and economic incentives were provided. Despite the post-revolutionary pro-natalist ideology, the high fertility regime was short lived, and fertility started to decline by the mid-1980s. Total fertility rate declined from 6.8 in 1984 to 6.3 in 1986, and further to around 5.5 in 1988. In an earlier paper, Ladier-Fouladi (1997), using birth registration data reached the same conclusion that the decline of fertility began in 1984. The decline was slow until the government population policy was reversed and a new family planning program was officially inaugurated in December 1989. Total fertility rate fell sharply after 1989, dropping from 5.5 in 1988 to below 2.8 in 1996, more than a 50 per cent decline in 6 years. The own-children estimates of fertility for Iran based on the 2000 Iran Demographic and Health Survey show that the TFR has declined further and reached replacement level (2.26) during the period 1998-2000. The figure for the year 2000 is 2.17.

2. Attainment of below-replacement fertility

Signs of the attainment of below-replacement fertility in Iran appeared in the first-half of the 1990s. Four developed provinces of Gilan, Semnan, Tehran and Isfahan reached a TFR of below-replacement level by 1996 (Abbasi-Shavazi 2001a). This was confirmed by the results of the Population Growth Estimation Survey (PGES) conducted by the Statistical Center of Iran in 1998. The survey divided the provinces of Iran into five regions according to their level of development (from developed to least developed). According to the 1998 PGES, TFR for Iran, as a whole, was 2.06, while TFRs in urban and rural areas were recorded as 1.88 and 2.39, respectively. Of the five regions included in the survey, three

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regions had experienced below replacement fertility. The two least developed regions, Regions 4 and 5, had TFRs of 2.4 and 2.9.

The result of the Iran Demographic and Health Survey conducted in 2000 was indicative of continuing fertility decline in Iran. The own-children estimates of fertility based on the IDHS showed that out of 28 provinces, five provinces had TFRs of below-replacement fertility during the period 1995-99, 20 provinces experienced TFRs of 2-3, two provinces had TFR of 3-4, and only in one province (*Sistan & Baluchistan*) the TFR was around 5.0. The own-children estimates for the three-year period of 1997-99 also indicated that in eight provinces the TFR was below 2.0, and 18 provinces had TFR between 2-3. The highest TFR (4.6) was recorded for *Sistan & Balucistan* province.

3. Rural-urban differences

As shown in figure 2, there was a large gap between TFRs in rural and urban areas during the early 1970s. Fertility in both rural and urban areas started to increase two years before the revolution and peaked in 1979-80, and then started to decline in the mid 1980s. The decline accelerated after 1989. The IDHS result showed that fertility continued to decline by the mid-1990s, although the trend in both rural and urban areas has slowed down recently. The large gap between TFRs in rural and urban areas has narrowed substantially. The total fertility rate in urban areas reached below replacement fertility by 1996. In 2000, the TFR in urban and rural areas of Iran ranged between around 1.9 and 2.4, respectively.

4. Age specific fertility rates (ASFRs)

The own-children estimates of ASFRs for Iran by rural and urban areas for the five-year periods of 1985-89 and 1996-2000 are shown in figure 3. As depicted, ASFRs in all age groups were high during 1985-89. There was a considerable gap between the ASFRs for rural and urban areas. Fertility fell sharply in all age groups by 1996-2000. The steep fertility decline in all age groups between the two periods suggests that simultaneously young couples are starting their childbearing later, married women are spacing their births longer, and older women are stopping their childbearing. This interpretation would explain the very sharp fall in total fertility that has occurred in Iran since 1988.

B. NUMBER OF BIRTHS AND THE DISTRIBUTION OF BIRTHS BY BIRTH ORDER

The decline of TFR can be examined in terms of annual number of births and the distribution of births by birth order. Statistics have shown that the number of births in Iran peaked in 1980; declined slightly during 1981-1985, and continued to decline afterwards (Civil Registration Organization, 2001; Ladier Fouladi, 1997). However, due to the effects of the post-revolutionary baby boom on the age structure of the population, it is likely that the number of births will increase in the future.

The changing distribution of women according to the number of their births provides useful insight into the fertility decline. Table 1 presents the percentage distribution of women aged 15-49 years by birth order for rural and urban areas in 1976 and 2000. It is apparent that the percentage with five or more births has drastically reduced from around 47 per cent in 1976 to around 30 per cent in 2000. The fall in the proportion of women with high parity has occurred in both rural and urban areas, although the percentage with five or more births in rural areas (38 per cent) was significantly higher than that in urban areas (25 per cent). As a result of the reduction of higher order births, there has been a sharp increase in the percentages of women with 1-2 births, and to some extent in the proportion of those with 3-4 order births. In 2000, slightly more than one-third of women had 1-2 order births. While the measures shown in table 1 may be affected by shifts in the age structure of women within the age range 15-49 years, the movements observed are very large.

C. NUPTIALITY CHANGE: 1966-2000

As shown in table 2, from 1966 to 2000, there has been a sharp increase in the proportion of women who had never-married. For example, the percentage of never-married women in age group 15-19 increased from 54 per cent in 1976 to around 84 per cent in 2000. The proportion never married in age groups 20-24 and 25-29 also increased from 1966 and 1976, but remained almost unchanged from 1976 and 1986 due to the post-revolutionary ideology. However, the figures rose again sharply from 1986 to 2000. The increases in age groups 25-29 and 30-34 became particularly noticeable.

In accordance with the increase in the proportion of never married women, the mean age at marriage for females also increased from 1970 to 2000 (table 3). According to the IDHS 2000, the mean age at first marriage for females increased considerably from around 14.5 years (in both rural and urban areas) in 1970 to around 20 and 21 in 2000 for rural and urban areas, respectively. Statistics have shown that despite the government's encouragement of the government of early marriage, the singulate mean age at marriage for women increased slightly from 19.5 year in 1976 to 19.7 year in 1986, but then sharply increased to 22 years by 1996 (Abbasi Shavazi, 2000).

To what extent have nuptiality and marital fertility contributed to the fertility transition? Abbasi-Shavazi (2000) has decomposed the changes in the total fertility rate from 1976 to 1996 into the components of changes in nuptiality and marital fertility. He found that most of the fall in fertility from 1986 to 1996 was due to the decline in marital fertility (3.11) with 0.6 being due to nuptiality change. In other words, 86 per cent of the fertility decline was due to the change in marital fertility and only 14 per cent to change in the age at marriage.

D. DETERMINANTS OF THE FALL OF FERTILITY IN IRAN

A number of important aspects of the Iranian fertility decline need to be dealt with in any comprehensive explanation. One is the fact that the decline began before the shift to an anti-natalist policy. Another is the pervasiveness of the fertility decline. Unlike the early stages of fertility transitions in many countries, there is no evidence of selective declines at the young and old extremes of the childbearing ages, but rather a decline across all age groups. Likewise, there is no evidence of diffusion of fertility decline from urban to rural areas, but rather a simultaneous and substantial decline across all geographic regions and in both urban and rural areas. Over time, there was a considerable degree of narrowing of urban-rural and regional differences both in fertility levels and in contraceptive prevalence rates.

Due to the suspension of the family planning program and the wholehearted campaigns for early marriage and for large families, fertility increased moderately in 1979 and was stable until the mid-1980s. Although, there was not a specific official population policy during the decade after the revolution, the social and psychological atmosphere of the society was favourable to high fertility during this period. The effect on people's lives was temporary, as was confirmed by the fact that fertility in Iran began to decline as early as 1984, well before the official inauguration of the family planning program in 1989.

The family planning program implemented in December 1989 has made an important contribution to the continued fertility transition. By mobilizing various government organizations and the mass communication network, the program succeeded in diffusing ideas throughout the entire country about the value of small families and about methods of family limitation. The contraceptive prevalence rate (CPR) has risen from 37 per cent in 1976 to around 72 percent in the year 2000. The CPR in rural areas has increased from 20 per cent in 1976 to 67 per cent in 2000; the corresponding figures for urban areas are 54 per cent and around 78 per cent, respectively (Mehryar and others, 2001).

Why has the Iranian family planning program been so successful in such a short time? In what follows, I argue that the social and cultural context of the society along with certain government policies such as rural development, health improvement, and the rise of literacy paved the way for a successful family planning program introduced by the Islamic government.

In contrast to the situation when the pre-revolutionary family planning program was introduced, Iran was culturally, economically and socially favourable to the introduction of the family planning program by the mid-1980s. The perceived costs of children were relatively lower in the 1970s, whereas in the 1980s due to the increase in education, even in rural areas, the costs of children increased. On the other hand, the increased education, particularly for girls, may have contributed to a higher level of contraceptives use. The level of education for women at reproductive ages has increased substantially over the last four decades, and the gap between rural and urban areas has narrowed considerably (table 4).

The government's policies such as increasing public education, particularly for girls, the establishment of the health network system, and the increase in access to electricity and safe water, transport and communication in remote areas of Iran have all are likely to have had an indirect effect on fertility decline. High aspirations and investments by families in their children's schooling have also affected couples' fertility decision making. Iranian girls and women stay more years in school and university than was the case previously and this factor delays marriage and childbearing. The sex ratio of the university students has changed in favour of girls over the last few years. In 1998, around 52 per cent of university candidates who were admitted to government universities were girls. The figure increased to 57 per cent in 1999, to around 60 per cent in 2000, and then to around 62 percent in 2001 (Abdollahyan, 2001). This has had a considerable impact on the improvement of the status of women and is, indeed, a central feature of social change in the society. Girls are staying in education longer; delaying their marriage, and this will affect their fertility decision-makings. Shadi-Talab (2001) in her study on *Iranian Women: Rising Expectations* concluded that "Iranian women are moving towards convergence in basic gender sensitive values. ... The main part of these reforms is the result of girls' empowerment through higher education from different socio-economic backgrounds. Therefore, Iranian women with rising expectations are an accelerating force of development in Iran".

Furthermore, the official program introduced by the government in 1989 enjoyed the support of religious leaders. It should be noted that some religious leaders were opposed to the first family planning program implemented before the revolution. However, *Ayatollah Khomeini* issued the first approval for the use of family planning methods in 1979. Despite this, the family planning program was suspended after the revolution, but studies have shown that family planning services were available through clinics during the early 1980s (Mehryar and others, 2001). The support of religious leaders in the late 1980s legitimized the family planning program, and the government provided family planning services to people without any religious barriers.

The decline in infant mortality was also a very important factor in the demand for fewer births and a smaller family size. The infant mortality rate declined from around 114 per 1000 live births in 1975 to 64 per 1000 in 1985, and 34 in 1994. The establishment of the health network system and its extension to rural and deprived areas of the country has been one of the key factors in reducing infant mortality. Urbanization has also contributed to the decline as, by 1996, more than 60 per cent of the population, were living in urban areas.

Soon after the revolution, the *Constructive Jihad Organization* was established to revive and develop the economic and social conditions of the villages and deprived regions. The activities of the organization ranged from providing educational and health services to constructing roads and dams, and to distribution of agricultural machinery and equipment. This contributed to the establishment of a sound and healthy rural environment after the Revolution, and made rural areas of Iran significantly different from

those of other countries in the region. By 1996, the majority of rural communities had access to electricity, TV, radio and piped water. Such developmental processes facilitated the success of family planning programs in Iran in general and in rural areas in particular during the second decade after the revolution.

However, despite the successful role of the family planning program in the fertility transition during the last two decades, some evidence suggests that not all the credit of fertility decline should be given to the government and its family planning programs. The rise of fertility during 1976 and 1978, as well as the universal fertility decline after 1984 are evidence that the transition occurred independent of official family planning policy. Interestingly, in spite of an active campaign by a variety of official and unofficial organizations in favor of early marriage and reproduction as well as the presence of strong economic and social incentives for marrying and having children, the age at first marriage increased during the early 1980s (Abbasi-Shavazi, 2000).

There is also a strong case that economic hardship relative to material aspirations accelerated the fall in fertility in Iran from the mid-1980s. Economic pressure has been a major factor in the postponement of marriage and the age at first marriage. Iran has been experiencing economic hardship after the revolution, particularly the decade after the War with Iraq. The cost of living has risen dramatically in recent years. Young people tend to delay their marriage until they get a salaried job to be able to afford the high living costs. The increasing cost of rearing children, particularly the cost of education, is another important factor in family decision-making. There has been a convergence of fertility behaviours in Iran in the recent decade, that is women of urban and rural backgrounds, as well as those from different social classes, the poor and the rich, illiterate and literate, have more-or-less similar fertility behaviour these days (Abbasi-Shavazi, forthcoming).

E. THE PAST PROJECTIONS OF FERTILITY FOR IRAN

Projecting fertility in such a situation where major social and political change has taken place is a difficult task. However, several attempts have been made to forecast the future of Iranian fertility.

The projection made in the Five Year Development Plan in the late 1980s, based on which the current family planning program was planned and came into effect, projected that TFR would decline to 2.3 by 2010. Zanjani (1993) in a study of fertility in Iran, using the 1986 census results, projected the future of fertility for the period 1991-1996 to 2016-2021. His projection consisted of three (low, medium and high) variants. Zanjani argued that these assumptions are unlikely to come into reality, and thus, he presented his own plausible projection by which fertility would decline to 3.85 by the period 2016-2021. He argued that his target may not even be achieved given the fact that the experience of other countries where family planning programs had been effectively implemented showed that fertility in those countries had declined only slightly. The other reason given in the report for this projection was that the family planning program in Iran is not coercive and, thus, may not be as effective as had been planned.

One of the reasons for the high projected TFR from the two studies was the fact that they used the 1986 census as the base population. This was also true for the projections made by the Population Division of the United Nations in the early 1990s. In the United Nations population projections, revised every two years, the assumed TFR for the 1995-2000 period in Iran was as follows: in the 1990 projections, 4.30; in the 1992 projections, 5.40; in the 1994 projections, 4.52; in the 1996 projections, 4.77; in the 1998 projections, 2.8. It was not until the 1998 projections that the Population Division accepted the reality of Iran's fertility decline. The 2000 Revision of the *World Population Prospects* projected the future of fertility for the period 2000 to 2050 under three variants. According to the high, medium and low variants, by 2005-10 TFR in Iran would decline to 2.60, 2.32 and 1.98, respectively. The corresponding figures for the period 2010-2015 would be 2.60, 2.10 and 1.60, respectively.

Obviously, the changes in TFRs in Iran have been so rapid that they could not have been predicted by those who projected the decline of fertility. As shown earlier, fertility in Iran declined to around 2.8 in 1996, the figure that Zanjani was sceptical about being reached by 2016-2021. Fertility has already fallen to the level that has been predicted for the period 2005-2010 by the United Nations Population Division. As Chesnais (2000, p. 126) argued 'the process of demographic transition is progressing further and faster than in the minds of experts; it is widening and deepening, to a much larger degree than commonly expected'.

F. THE FUTURE OF FERTILITY IN IRAN

The task of this paper was to examine the possibility of the decline of Iranian fertility to the replacement level. The data presented in this paper shows that fertility in Iran has already declined to below-replacement level. The leading factors likely to be involved in the fall of fertility to such a low level were briefly discussed. A question that remains unanswered concerns plausible assumptions for the future of Iranian fertility. Will fertility in Iran rise again in the near future, will it level off at the current level, or will it decline further?

In what follows, I argue that fertility in Iran will continue to decline for some years. I will also speculate about the possibility of rising fertility in the future.

1. *Continuing fertility decline*

Several reasons justify further fertility decline in Iran.

First, as discussed earlier, there are still significant provincial as well as rural and urban differences in fertility in Iran. Some provinces still have high fertility, while some have experienced below-replacement fertility. According to the IDHS, the highest TFR in Iran was recorded for *Sistan and Baluchistan* Province (4.69), while *Gilan* Province experienced a TFR of 1.67 during the period 1998-2000. It is very likely that high fertility provinces will join the low-fertility provinces, thus the gap between the high and low fertility provinces will be reduced further. This will bring the fertility at the national level lower. Below-replacement fertility will be reached by most of the provinces of Iran even if the socio-economic characteristics do not become similar to the national level. However, achievement of such low levels in remote provinces such as *Sistan Baluchistan*, *Hormozgan* and *Ilam* may not be as fast as other provinces due to their ethnic and religious diversity. The study of Provincial fertility levels and patterns showed that, although the trend of fertility has been more-or-less similar in all provinces of Iran, there exists substantial variations among the provinces. Thus, a reasonable degree of provincial variation is inevitable.

Second, the process of urbanization is another reason for the fertility decline in the future. According to the 1996 census around 60 percent of the population were living in urban areas and it has been estimated that by 2020 around 75 per cent of the population will live in urban areas.

Third, the level of education is increasing rapidly. Children of all social classes, particularly the poor, have access to education, and the small educational differences in the society will be reduced further in the future. The level of girls' education has increased over the last two decades and the gap between male and female education has narrowed substantially. This has resulted in relative gender equity in Iran and women have major roles in fertility decision-makings. Although the level of female employment is still low, given the 'rising expectation' for Iranian women (Shadi-Talab, 2001) it is highly likely that the level of women's labour force participation will increase in the future. Age at first marriage for women has increased significantly. Doroudi-Ahi (2001) showed that there is a sex imbalance in ages at marriage in Iran; that is the number of women in ages at marriage is higher than that of men. This has occurred due

to the post-revolutionary baby boom by which the number of men in older cohorts who were born before the revolution is greater than women of younger cohorts who are the babies of the post-revolution. Women will be much less in demand as the cohort size rises and hence a lower proportion will marry. This will increase the age at marriage for women at least for the next decade.

The higher status of women in Iran will have a negative effect on fertility in the future. This is in line with the 'gender equity' argument made by McDonald (2000), and supports Dyson's (2002) hypothesis that one of the main factor of the fall of fertility in developing countries is that 'women become more like men'. Shadi-Talab (2001) has also noted that "Iranian girls gradually practice democracy within the family, and patriarchal power is slowly diminishing. Although, attitude changes is very slow process, the interaction between education and changes in norms and value system is observable in the share of girls participation at universities from the most deprived provinces and far from their home town."

Fourth, as Caldwell, Caldwell and McDonald (2000) have argued, governments' contributions to population control in Asian countries has been very important. Given the fact that the echo of the post-revolutionary baby boom will occur in the 2000-2010 decade, that decade has been named as "the decade of population crisis" [*daha-e bohran-e jamiyyat*] in Iran. The government strongly supports the reduction of the number of births in this decade. All responsible government departments and institutions, as well as NGO's are committed to this policy. A wide range of brochures and pamphlets are distributed in family planning departments. Two-child policy [*two is enough*] is advertised everywhere; in bus stops, public spaces, parks, cinemas, and even on children's toys and chocolate boxes! Population and family planning is being taught as a compulsory unit to all university students. All the efforts are concentrated on the improvement of health, the expansion of reproductive health services, as well as the reduction of fertility in rural areas and the provinces with high fertility. These programs will not only affect the attitudes of childbearing women, but also will shape the fertility attitudes and behavior of young generations.

The result of a small-scaled qualitative research undertaken in 2001 by the author on fertility behavior of women in Yazd province supported the ideational change towards small family size norm in the society. Most of the women who had low level of education, preferred 2 or 3 children, and there was no difference between place of residence (rural and urban areas) as well as the economic status of the women (Abbasi-Shavazi and Kaveh Firouz, 2002).

Furthermore, the effectiveness of family planning methods is another factor supporting further fertility decline. According to the IDHS, the contraceptive prevalence rate was around 72 per cent in 2000. There exists a small gap between the level of CPR in rural and urban areas. However, a significant proportion of pregnancies (around 33 per cent) were still unintended (Abbasi-Shavazi and others, 2001). With the improvement of the quality of the family planning services, the level of unwanted pregnancies will be reduced, and thus, fertility will decline further.

Finally, as Chesnais (2000) argued, the impact of globalization on social life in other countries should not be ignored. No specific country or region can be seen in isolation from other countries in the exchange of ideas and culture today. However, resilience of cultures should also not be underestimated.

2. *The possibility of rising fertility*

Will Iran or the selected provinces experience an increase in their fertility in the future? Some believe that economic hardship will be over within a certain number of years and then people will compensate their low fertility. The other proposition is that the low fertility that has been observed may be temporary. The reason is that fertility has fallen simultaneously at all ages. The low fertility of the older women may have been a response to past high fertility. However, it is possible that those now experiencing low fertility in their 20s, will in their thirties, have higher fertility than women who are now

in their thirties. If this happens, there would be tendency for the TFR to rise over time. This is described by demographers as a tempo effect. However, given the high level of education and the change of values for the young generation, it is unlikely that couples will change their fertility behaviour in the future. In addition, women of the post-revolutionary baby boom who will start their childbearing in the coming decade, have smaller ideal family size, and thus, the proposed tempo effect may not be large.

It may also be possible that with the rapid fall of the fertility and slower population growth rate in Iran, the government will lose its interests in population control, or adopt a pro-natalist policy in the future. Caldwell, Caldwell and McDonald (2000) noted that low level of fertility in some developing countries has caused surprisingly little reaction outside academic circles. They stated that one reason for the slow government reactions is “population momentum; the fact that age structures are still adjusting to the relatively new low fertility levels and in most cases will not fully adjust for decades”. Given that the government of the Islamic Republic of Iran is faced with the prospects of a “post-revolutionary baby boom”, no official policies are expected to be implemented with regard to low fertility in Iran. Thus, the possibility of adopting pro-natalist policies in the near future is unlikely.

The other reason why low fertility may not attract due attention in the near future is the fact that not all provinces have experienced below-replacement fertility. Some provinces, particularly in rural areas, still have higher fertility than the national level. Besides, some government officials and experts believe that this low level of fertility is mainly due to recent economic hardship, and thus fertility may rise again after this economic hardship is over.

Even if the government introduces a pro-natalist policy, it may not affect people’s fertility decision making easily. Women who were interviewed in the qualitative study in Yazd, indicated that they would not increase their fertility, even the government provided some incentives to increase fertility. Economic factors have been involved in the onset of fertility decline, but the small family size has become a norm in the society. Families who had large family size have been aware of the disadvantages of large family size and have tried to control their fertility. The level of future fertility in Iran depends upon the decisions which will be made by the current and the next generation. If the coming generations come to the conclusion that having small family size has disadvantages for them, then they may decide to increase their fertility. However, given the experience of the advanced countries today, it is unlikely that the fertility will simply increase in the future. Once the small family size norms internalizes, then it would be difficult to change it at least in the relatively short term.

Some may argue that with the presence of sex preference in the society, fertility is likely to remain high and/or will not decline further. Recent statistics have shown that sex preference, and particularly son preference, is no longer an issue in fertility decision-making. Women interviewed in the IDHS were asked about their attitudes on the sex of their next child. The majority of the women did not have sex preference for their future births. Interestingly, among the women who had a sex preference, a higher proportion indicated that they would prefer girls not boy. This is opposed to the generally held view that son preference is one of the factors of high fertility in developing countries in general, and Asian countries in particular.

G. SUMMARY AND CONCLUSION

Fertility trends in Iran over the last three decades were reviewed in this paper. Total fertility rate declined moderately during the early 1970s, before it rose after the revolution due to the suspension of the family planning programs. The decade after the 1979 revolution was marked by the pro-natalist approach taken by the Islamic government, although no specific population policy was introduced. The pro-natalist ideology did have a small impact on fertility for a few years during the early 1980s, and couples started to control their fertility by the mid-1980s, well before the revival of the family planning program in 1989.

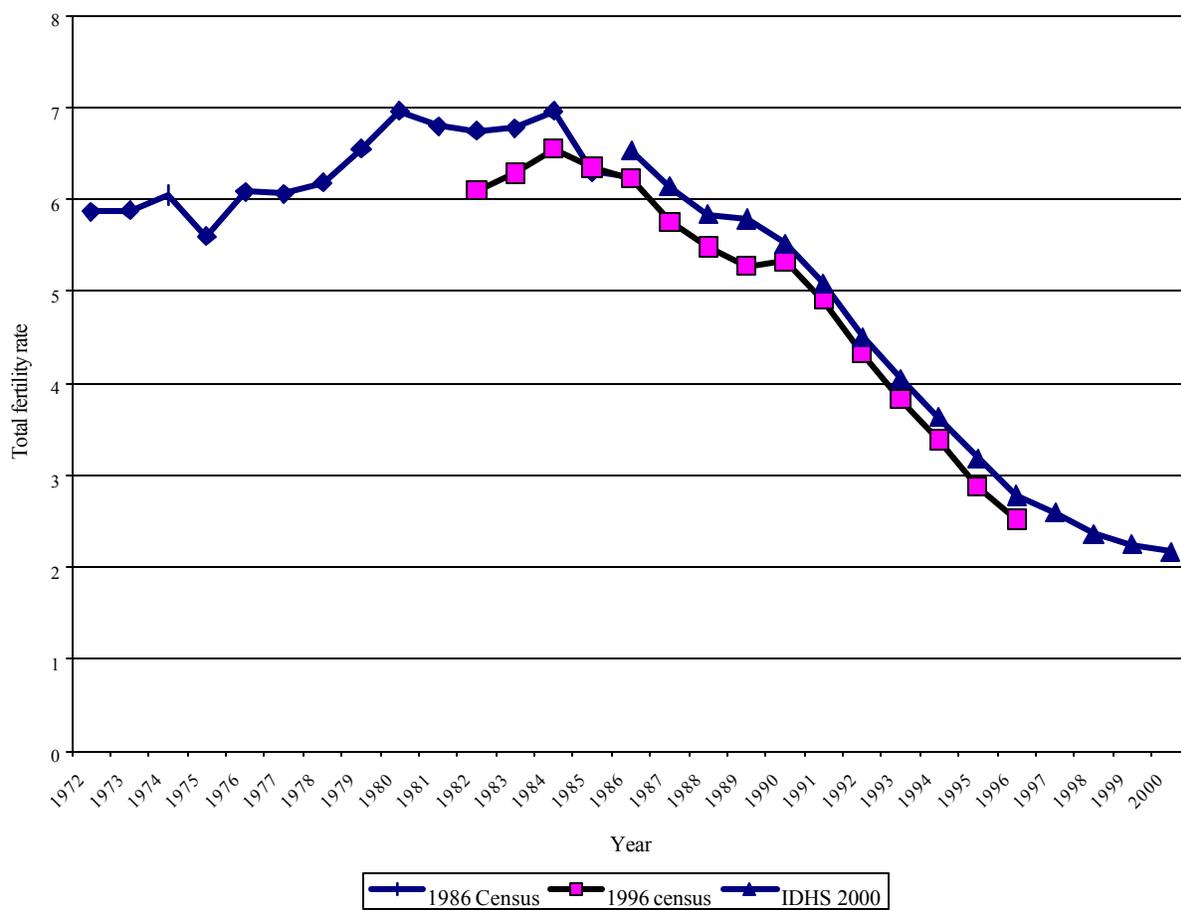
Kaveh-Firouz (2002) argued that implicit policies of the government such as the improvement of health system, rural development and the expansion of education throughout the country have indirectly contributed to the onset of the fertility decline in the 1980s, and undoubtedly helped the success of family planning program over the last decade.

The data presented in this paper showed the sharp fertility decline in Iran in recent years. Total fertility has reached replacement level recently. The fertility in urban areas is below replacement level and that of rural areas is also close to replacement level. Thus, the question of reaching replacement fertility in Iran is not an issue. The phenomenal decline in Iran is somewhat different from those of the advanced countries, as the decline occurred in such a short time, and all areas of Iran and women of all ages experienced the fall simultaneously. The projections made for Iran over the last decade have been behind the reality as most of them overstated the level of fertility for Iran in their projections. The 2000 medium projection by the United Nations Population Division for Iran for the period 2010-2015 has already been reached. I argued in the paper that the fertility in Iran will decline further, although the decline would not be as rapid as it has been during the last decade.

H. ACKNOWLEDGEMENTS

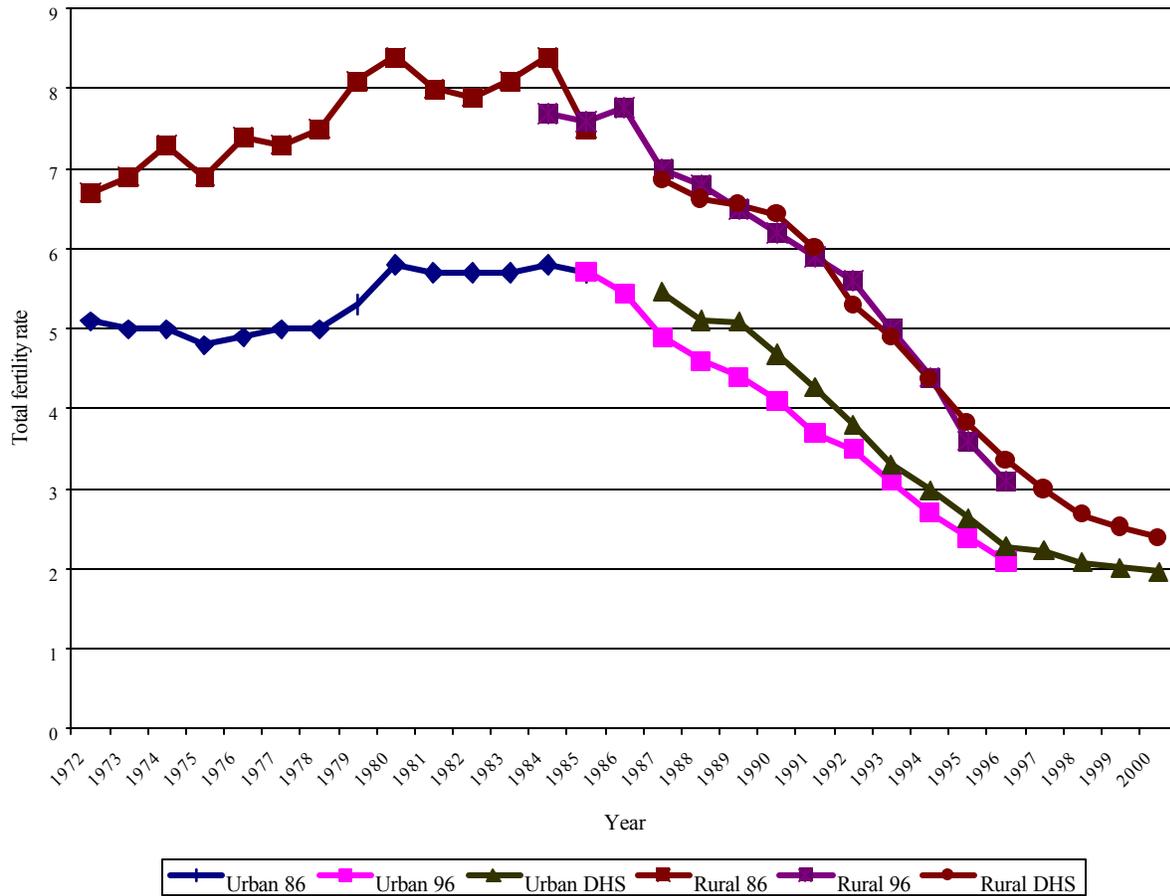
This paper is based on the findings of a project on *Fertility Transition in Iran: Demographic Similarity within Socio-economic Diversity* supported by the Wellcome Trust (Ref: 061067/Z/00/Z). Useful comments from Peter McDonald and Marie Ladier-Fouladi, support from Bahram Delaver and Nemat Nassiri who provided the necessary data for the paper, and assistance from Meimenat Hosseini and Nahid Doroudi are gratefully acknowledged. Some parts of this paper are based on Abbasi-Shavazi (2001b).

Figure 1. Own-children estimates of total fertility rates for Iran: 1972-2000



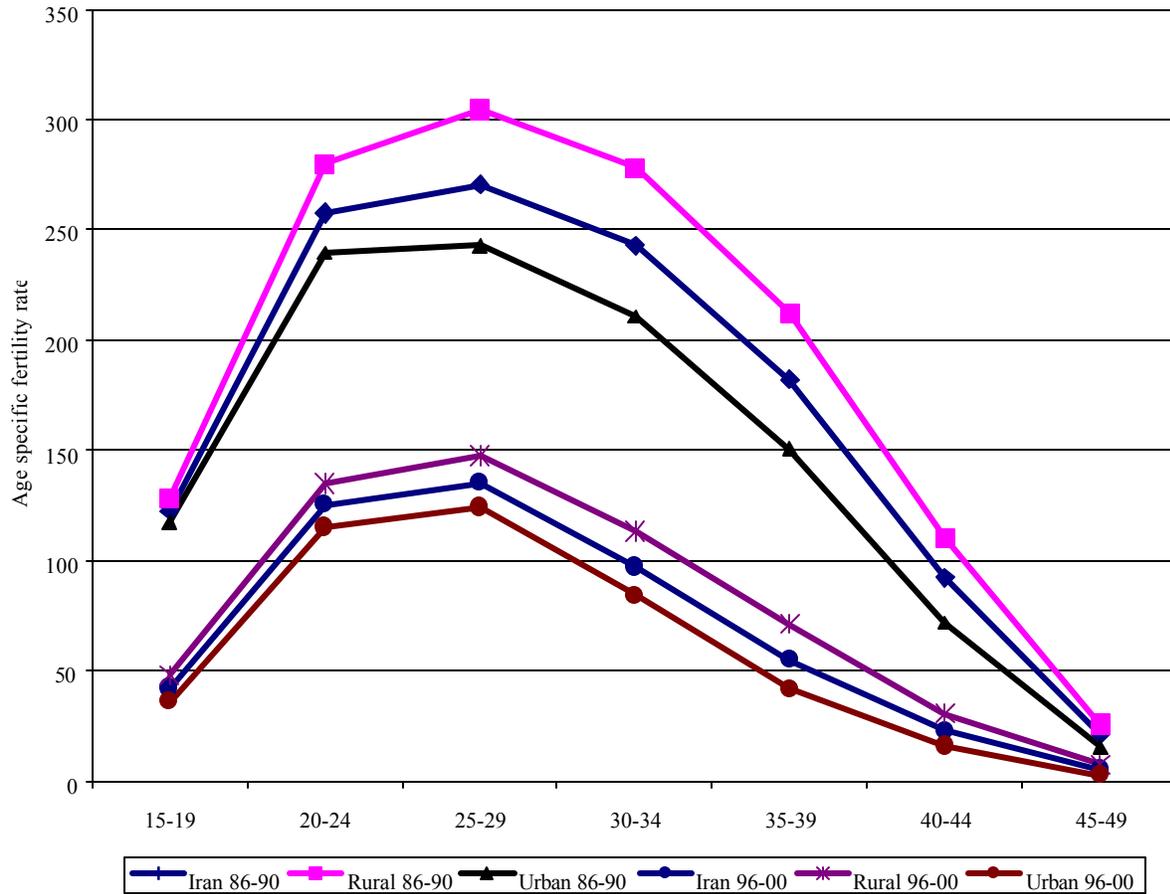
Source: Figures calculated by the author using the own-children method applied to the 1986 and 1996 censuses, and the 2000 Iran Demographic and Health Survey.

Figure 2. Own-children estimates of total fertility rates for rural and urban areas of Iran: 1972-2000



Source: Figures calculated by the author using the own-children method applied to the 1986 and 1996 censuses, and the 2000 Iran Demographic and Health Survey.

Figure 3. Own-children estimates of total fertility rates for Iran by rural and urban areas, 1986-90 and 1996-00, Iran Demographic and Health Survey 2000



Source: Figures calculated by the author using the Iran Demographic and Health Survey 2000.

TABLE 1. PERCENTAGE DISTRIBUTION OF WOMEN AGED 15-49 YEARS BY BIRTH ORDER IN IRAN BY RURAL AND URBAN AREAS, 1976 AND 2000

Birth order	Iran Fertility Survey 1976			IDHS 2000		
	Total	Urban	Rural	Total	Urban	Rural
0	9.5	9.2	9.8	11.7	11.2	12.6
1-2	22.8	27.2	18.3	34.3	37.1	29.1
3-4	21.0	22.9	19.2	24.4	26.4	20.3
5+	46.7	40.7	52.7	29.6	25.3	38.0
Total	100.0	100.0	100.0	100.0	100.0	100.0

Source: H. Agha, Study of fertility in Iran and its relation with socio-economic indicators based on the Iran Fertility Survey, 1985 (Population Studies Center, University of Shiraz). Figures for 2000 were calculated based on the data from the Iran Demographic and Health Survey, 2000.

TABLE 2. PERCENTAGE NEVER MARRIED: WOMEN AGED 10-14 TO 30-34, 1966 TO 2000

Age group	1966	1976	1986	1996	2000
10-14	97.6	99.9	97.0	98.8	99.1
15-19	54.1	65.7	65.7	82.1	83.5
20-24	13.4	21.4	25.8	39.5	47.1
25-29	3.8	6.8	9.4	14.8	20.8
30-34	1.7	2.7	4.6	6.4	9.3

Sources: N. Doroudi Ahi, Marriage and sex imbalance in ages at marriage: Marriage squeeze in Iran, 1966-1996, MA thesis, Department of Demography, Faculty of Social Sciences, University of Tehran, Tehran (2001); Iran Demographic and Health Survey 2000.

TABLE 3. MEAN AGE AT FIRST MARRIAGE FOR MALES AND FEMALES IN 1970, 1980, 1990 AND 2000

Year	Males		Females	
	Rural	Urban	Rural	Urban
1970	23.1	23.4	14.4	14.4
1980	22.3	23.2	17.0	17.8
1990	22.4	24.9	19.6	19.5
2000	24.0	25.8	19.7	20.8

Source: Iran Demographic and Health Survey, 2000.

TABLE 4. LITERACY RATE FOR WOMEN AT AGE GROUPS 15-19 TO 25-29, IRAN BY RURAL AND URBAN AREAS

Age groups	1966		1976		1986		1996	
	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural
15-19	57.7	5.4	75.4	19.8	85.8	53.0	96.9	86.4
20-24	41.2	2.7	59.4	10.1	75.8	36.5	93.8	77.9
25-29	29.5	1.4	49.4	4.9	65.5	22.0	89.5	65.4

Sources: Statistical Centre of Iran, various censuses.

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