Fertility dynamics in Iran, 1970-2000: Parity progression ratios and measures of starting, spacing and stopping[1]

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Abstract

Iran's extraordinarily rapid fall of fertility (the total fertility rate fell from 7.0 in 1980 to 2.1 in 2000) has been confirmed by analysis of a number of surveys and of the 2001 Census. This is documented fully in a recent paper by Abbasi-Shavazi and McDonald (2005) using age-specific fertility rates and total fertility rates at the national and provincial levels, urban and rural, for single calendar years over the last three decades. The observed pattern of decline is one in which fertility has fallen simultaneously in all age groups and in all geographic settings, hence accounting for the rapidity of the observed decline at the national level. Remaining geographic differences in fertility relate not to the pattern or timing of fertility decline but to initial differences in levels of fertility when the decline commenced and, to a lesser extent, to the speed of decline. The authors argue that the nation's fertility is likely to continue its decline as several provinces now have below replacement level fertility and fertility is still falling in the remaining provinces that have relatively high fertility.

Single calendar year time trends in the total fertility rate allow a precise association of the fertility decline to the timing of the momentous socio-political and population policy shifts before and after the 1979 Islamic Revolution. These associations give rise to an interpretation of the fertility decline that is dominated by the influence of cross-sectional events. However, it is well known that trends in the cross-sectional total fertility rate can be confounded by changes in the timing of births across women's lifetimes (tempo) as well as by changes in the numbers of children that they have by the time they end their childbearing (quantum). The issue arises as to whether trends in alternative measures of fertility that control for the parity distribution rather than the age distribution (age at first birth, age at last birth, parity progression ratios) show the same timing associations of fertility decline with social or political changes as observed for changes in the total fertility rate. To do this, we use the 2000 Iran Demographic and Health Survey to calculate time trends in parity progression ratios and measures of starting, spacing and stopping of childbearing during the last three decades.

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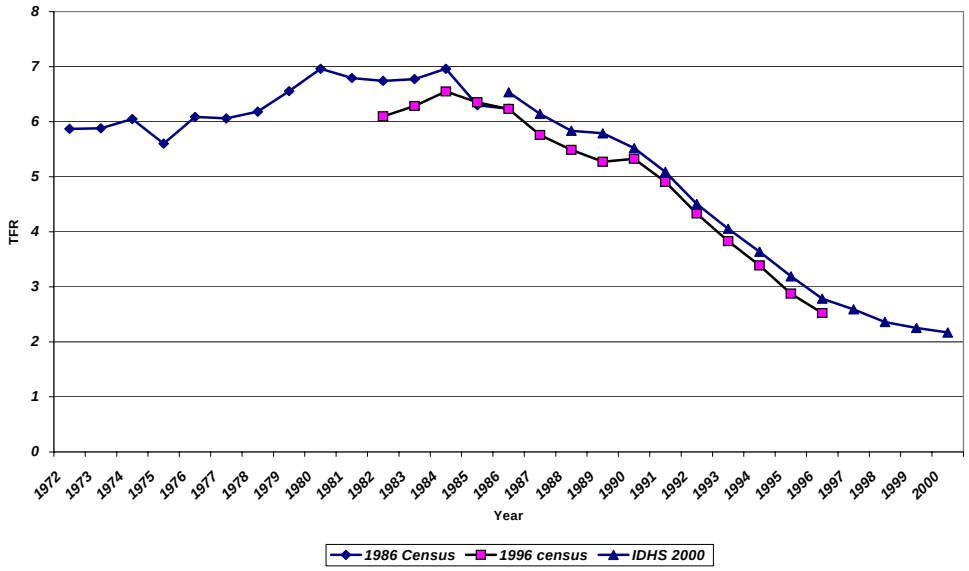
Iranian fertility trends based on age specific measures

The conventional age-based measures of fertility are age specific fertility rates and their sum over all ages, the total fertility rate. Based on these measures, the fertility transition in Iran has passed through different phases from 1972 to 2000. After the implementation in 1966 of the first family planning program, the total fertility rate declined from around 7.7 in 1966 (Amani 1970) to around 6.5 in 1976 (Aghajanian and Mehryar 1999). Despite the approval of family planning methods by Ayatollah Khomeini in 1979, the pre-revolutionary family planning program was suspended immediately after the revolution. Although no specific population policy was introduced after the revolution, the new government adopted policies that were effectively pronatalist. Soon after the revolution, the legal minimum ages at marriage for girls and boys were reduced from 15 and 18 to 13 and 15 years, respectively (Azimi 1981). Then, during the war with Iraq, families were encouraged to have more children and substantial economic incentives were provided (Abbasi-Shavazi *et al.* 2002). In apparent response, the total fertility rose and hovered around seven children per woman in the first half of the 1980s.

Despite the post-revolutionary pronatalist ideology, the high fertility regime was short lived and fertility fell to about 6.3 births per woman in 1986 and further to around 5.5 in 1988. After the government population policy was reversed and a new family planning program was officially inaugurated in December 1989, again in apparent response, the total fertility rate fell sharply dropping from 5.5 in 1988 to around 2.8 in 1996, an almost 50 per cent decline in six years (Figure 1). The 2000 IDHS showed that the fertility rate had declined further reaching the near-replacement level of 2.2 (Abbasi-Shavazi and McDonald 2005). Overall, as described, the time trends in the total fertility rate can be associated fairly precisely with cross-sectional political and policy changes.

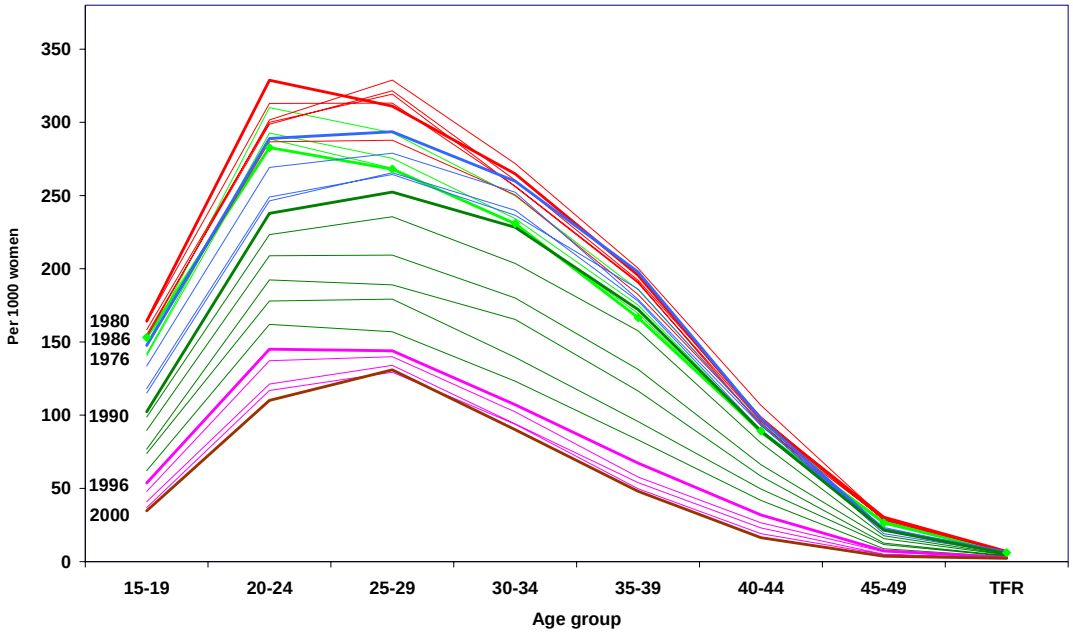
Figure 1. Own-children estimates of Total Fertility Rates for Iran: 1972-2000



Source: Own-children method applied to the 1986 and 1996 Censuses, and the 2000 Iran Demographic and Health Survey.

Figure 2 shows that the general trend for age specific fertility rates during the period 1976-2000 was that they moved in the same direction as the total fertility rate at all ages. When the rate of fertility rose, it rose at all ages; when it fell, it fell at all ages. However, the rise in the early 1980s was somewhat more concentrated in the peak ages of childbearing, especially age group, 25-29 years. Thus, overall, the trends in age specific fertility rates also tend to focus interpretation of the changes in fertility upon the impact of cross-sectional social and political changes as described for the total fertility rate.

Figure 2. Own children estimates of Age Specific Fertility Rates for Iran, 1976-2000



Source: See Figure 1.

Parity specific measures of fertility trends

That fertility fell in all age groups during the decline suggests that simultaneously young couples were starting their childbearing later, married women were spacing their births longer, and older women were stopping their childbearing. The simultaneity of these patterns of change would explain the very sharp fall in total fertility that has occurred in Iran since the late 1980s, but it also indicates that the timing of births was changing. As many authors have indicated, age-specific fertility rates can be misleading because they can rise and fall with changes in the time that women have their various births, *tempo*, independently of changes in the number of births that they eventually have, *quantum*. While the decline in fertility is so large that large falls in the quantum of fertility are inevitable, the level to which completed fertility is falling is still subject to question because of the potential impact of a delay of births – a tempo effect.

Age specific fertility rates (and their sum, the total fertility rate) use age as a controlling or standardising factor because the age structure of the population changes

from year to year. If we did not take changes in the age distribution into account (that is, if we simply used the trend in the total number of births), we could obtain a misleading impression of the rate at which women are having children. A concentration of women in the peak ages of childbearing would mean that births would tend to rise simply because of the change in age structure. However, age is not the only structural feature of a population that may influence the number of births in a given year. The other important structural feature is the distribution of women according to the number of children that they already have, that is, their parity and the time since the most recent birth. To better assess the impact on fertility of changes in the timing of births, the parity progression model provides an alternative to conventional age-based approaches to the study of fertility in which the control used is not age but the number of children that a women has already had in association with the time since the most recent birth (Feeney 1983; Feeney and Yu, 1987; Ni Bhrolchain 1987). It has also been argued that analysis by parity facilitates interpretation of fertility trends because people make their decisions about having a child on the basis of the number of children that they already have rather than simply upon how old they are.

In the literature, three main approaches to the analysis of fertility using parity have been utilised (Ni Bhrolchain 1987; Hinde 1998, Chapter 9;):

1. Parity progression for birth or marriage cohorts. Parity progression for birth cohorts describes the timing (age) of progression from one birth to the next across the lifetime of real birth cohorts. For example, for those born in 1960, we would examine the percentage that had first births in each subsequent year, the percentage who had second births, and so on. Parity progression by marriage cohort does likewise for year-of-marriage cohorts by time since marriage. Age or marriage cohort summary measures relating to age at first birth and age at last birth can be derived from data in this form.
2. True parity cohorts. Here the population is organized according to the year in which they had each birth and how long they take to have the next birth. Thus, for example, we consider all women who had a first birth in 1982 and measure the proportion that moves on to the second birth in each subsequent year.
3. Synthetic parity cohorts. In this case, we bring together all those who had a birth of a given parity in a particular year and measure the probability that they would do this given the time since their previous birth. These probabilities are then combined into a summary synthetic measure for all durations since the previous birth. Finally, the synthetic probabilities obtained for women of each parity can be combined into a single measure analogous to the total fertility rate.

This paper first examines synthetic parity cohort measures as these provide the direct comparison with the synthetic cohort age based measure, the total fertility rate. Then we present summary measures of starting and stopping for marriage cohorts. The following questions are addressed. Are the close associations of trends in cross-sectional fertility with social and political changes confirmed by analysis using parity progression ratios? From the perspective of trends in these alternative measures, will Iran's fertility continue to decline, will it stall at a certain level, or will fertility increase in the future? What are the policy implications for Iran's family planning program?

The 2000 Iran Demographic and Health Survey

The IDHS was conducted in 2000 and is based on a representative sample of households throughout the country. The sample included 113,913 households in 28 provinces (plus the city of Tehran); around 4000 households in each province (2000 households in rural and 2000 households in urban areas). Interviewers contacted 91,653 ever-married women aged 10-49 and were able to complete interviews with 90,740 women. Household data, including date of birth and age at first marriage, are available for all members of each household. Information on reproductive health was obtained for all ever-married women aged 10-49 including the timing of all live births (Ministry of Health and Medical Education 2002).

Parity progression ratios (synthetic cohorts), Iran 1981-1999

The final columns of Tables 1-7 show synthetic cohort parity progression ratios for each successive birth from the first through to the seventh. These are provided for individual calendar years from 1981 to 1999. These measures are interpreted as the chance that a woman of parity x over her lifetime will have a birth of parity x+1 based on the fertility experience of the given year. In respect of the first birth, the progression is from the year of marriage. Thus, for example, in Table 2, the lifetime probability of progression from parity 1 to parity 2 based on the experience of women making this progression in 1982 was 0.949. By convention, for convenience, ten years of experience are used to estimate this 'lifetime' progression. In other words, it is assumed that no progression from parity x to parity x+1 is made more than 10 years after the parity x birth took place. As data for the ten years preceding the year of birth are required to construct these measures, it is not possible from the 2000 DHS to estimate values before 1981 because of censoring.

The tables also show probabilities that a woman of a given parity x will have a birth of parity x+1 in the given year, t years after the birth of the child of parity x given that she has not had the birth in a previous year (denoted as q**t). For example, in Table 2, the value q**2 for 1982 (0.445) is the probability that a woman who had her first birth in 1980 and had not had her second birth before the beginning of 1982 will have the second birth in 1982. These probabilities are used to calculate the lifetime parity progression ratio, the final column of each table. It is possible to examine incomplete experience prior to 1981 using these probabilities up to the time when censoring takes place.

Progression to the first birth (from marriage)

Table 1 indicates very little change across the whole period in the lifetime progression to the first birth. Thus, it can be concluded that Iran's fertility decline is in no way the consequence of married women opting to have no children. Overall, the progression ratio is in the order of 0.93-0.94. This means that 6-7 per cent of married women remain childless, a level fairly consistent with expected infecundity. Slightly lower ratios around 0.91-0.92 were observed for the years, 1987-1990. This may have been the result of widowhood or disablement from the Iran-Iraq War. This interpretation is consistent with the individual year probabilities (q**t) that suggest that the lower lifetime progressions were due mainly to low rates of progression from year five

onwards. This means that the relevant marriages would have taken place in the peak war years.

The individual year probabilities (q**t) also indicate any changes in timing of the first birth after marriage. The only strong trends observable here are for q**0, the probability of having a birth in the same year as the year of marriage. This measure was relatively high in the early years of the revolution and fell sharply in the latest years (1995+). The rise in the early 1980s is consistent with the pronatalism of that time. The recent fall suggests that some Iranian couples may have begun to use contraception to delay the first birth within marriage from 1995 onwards. This is a direction to be expected in a low fertility society where sexual relations prior to marriage are strictly forbidden and age at marriage remains relatively early.

Progression to the second birth

Lifetime progression to the second birth (Table 2) was very high in the early years of the revolution, fell slowly to 1990 and then more sharply in the 1990s. These trends correspond closely to the observed trends in the total fertility rate. The most recent figures indicate that around 15 per cent of women who have a first birth do not have a second birth. This compares with only about five per cent not progressing to the second child in the early 1980s. Thus, towards the end of the period, the one-child family seems to have become an outcome for almost 10 per cent more married women. It could be presumed that the five per cent who did not progress beyond the first birth in the early 1980s represents the natural outcome. This would mean that the additional 10 per cent stopping at one child by the end of the period constituted choice on the part of these couples. Preference data obtained by the authors in the 2002 Iran Fertility Transition Survey confirms an emerging trend in some parts of the country for one child only (Abbasi-Shavazi, McDonald, and Hosseini-Chavoshi 2003; Abbasi-Shavazi *et al.* 2005).

The individual year probabilities show one of the most interesting of all of the observed trends. There is a sharp fall in the speed of progression to the second birth in the 1990s indicating much wider spacing between the first and the second birth in these years. For example, in 1981, 87 per cent of women had progressed to the second birth by the fourth year after the first birth; in 1999, only 46 per cent had done so. The timing of this widening of the birth interval corresponds closely with the reintroduction of the nationwide family planning program in Iran. The delay of both the first (from 1995) and the second birth (from 1990) would have pushed prospective births into the future giving rise to the possibility of a compensating tempo effect in the future. Prior to 1990, there is little evidence of a change in the interval between the first and the second birth suggesting that this was not an explanation of the fluctuations in fertility from the mid 1970s to the late 1980s.

Progression to the third birth

It is with progression to the third birth that we begin to observe the substantial change in the quantum of fertility. In the early 1980s, 96-97 per cent of women who had had a second child continued to the third. By 1999, this had fallen to 60 per cent. The trend over the period closely mirrored the trend in the total fertility rate – high in the early 1980s, a slow decline to 1990 and more rapid decline thereafter. It is very

evident that 'stopping at two' is the central story of fertility decline in Iran. It is also evident that this new pattern had commenced prior to the reestablishment of the family planning program. Thus, the family planning program can be considered to have facilitated and accelerated a pattern of behaviour that had become established in parts of the society in the mid 1980s. This is consistent with an explanation that we have proposed based on analysis of the 2002 Iran Fertility Transition Survey. The explanation is that the economic aspirations of the population were raised by the revolution but the failure of household economic outcomes to meet expectations had become clearly evident by the mid 1980s. In addition, it was evident to parents by the mid 1980s that their children would have good opportunities for education and social advancement in the new society so long as the parents were able to support their children through education. Stopping at two must have been seen by parents as a strategy to improve their own economic outcomes and the educational opportunities of their children (Abbasi Shavazi, McDonald and Hosseini Chavoshi, 2003). The interesting question becomes what means of fertility control did women use to stop at two before the reestablishment of the family planning program? We may find an answer to this question in the survey that we have recently completed, the 2005 Iran Low Fertility Survey in which we obtain detailed contraceptive use histories for the first time in Iran.

The individual year progressions indicate another very interesting trend not evident from age-based analyses. The emergence of 'stopping at two' seems to have been preceded by a long-term trend towards wider spacing of the second and third births, a trend that continued through the early 1980s when fertility rates were at their highest. For example, based on the 1976 cross-section, 56 per cent of women had moved from their second to their third birth by the second year; in 1982, at the height of the high fertility, only 45 per cent had done so. This may mean either that couples were already attempting to stop at two before they were able to do so more successfully or that they were indeed attempting to widen the interval between the second and third birth.

Progression to the fourth and higher order births

The phenomenon of 'stopping at two' extends to higher parities in the sense that, if a woman already had more than two children, there was an increased tendency across time to stop at whatever her parity was (Table 8). Between 1986 and 1990, largely before the impact of the family planning program, the tendency to stop increased as parity increased. This remained the case between 1990 and 1999 with the family planning program in operation.

Table 8. Lifetime parity progression ratios, synthetic parity cohorts, ever married women, Iran, 1981-1999

Parity	Percentage Progressing			
Progression	**1981**	**1986**	**1990**	**1999**
Marriage to 1st	94.7	94.4	92.1	93.2
1st to 2nd	95.1	95.1	94.2	85.4
2nd to 3rd	96.4	95.1	87.7	60.2
3rd to 4th	97.9	93.9	88.5	50.0
4th to 5th	97.4	94.1	84.5	46.8
5th to 6th	96.4	94.3	82.9	39.7

Source: Derived from Tables 1-6.

Summary: synthetic parity cohorts

As a summary measure, we have calculated the implied parity distributions and the lifetime average number of children ever born to the synthetic parity cohorts (Table 9). The shift in the implied parity distribution is truly startling matching the substantial decline in the total fertility rate – from 80 per cent to just 4 per cent having six or more children in a period under two decades and from 15 per cent having three or fewer children to 76 per cent.

The lifetime average numbers of children ever born to ever married women for the years shown in the table approximately match the total fertility rates recorded in the equivalent year, except for 1999. For 1999, the cross-sectional total fertility measure obtained from the parity analysis appears to be somewhat higher than the equivalent total fertility rate. Allowing for an adjustment for women who never marry, the parity-based total fertility rate is around 2.6 births per woman compared to the age-based rate of 2.3. This may mean that there is a tempo effect in operation that is controlled in the parity analysis but not in the age analysis. This tempo effect may arise from the increased delay of the first birth after marriage and of the second birth after the first.

Table 9. Implied completed parity distributions and lifetime average parity, synthetic parity cohorts, ever married women, Iran, 1981-1999

Completed	Percentage Distribution			
Parity	**1981**	**1986**	**1990**	**1999**
0	5.3	5.6	7.9	6.8
1	4.6	4.6	5.3	13.6
2	3.3	4.4	10.7	31.7
3	1.8	5.4	8.8	23.9
4	2.2	5.2	10.4	12.8
5	3.0	4.3	9.7	6.7
6+	79.8	71.1	47.2	4.5
Total	100.0	100.0	100.0	100.0
Average parity*	6.8	6.4	5.2	2.7

* Assumes an average of eight for those with 6+ children.
Source: Derived from Table 8.

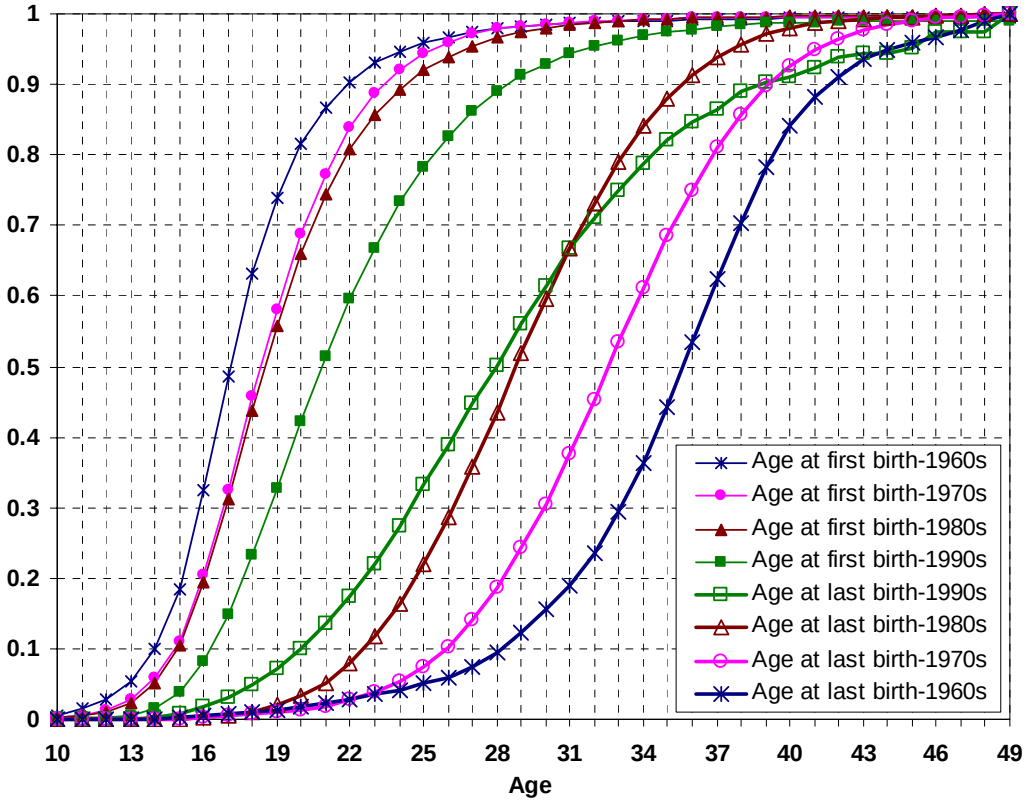
Age at first birth and age at last birth: marriage cohorts

Figure 3 shows the dramatic change in the reproductive life spans of Iranian women married since the 1960s. The figure shows the cumulated proportions of each marriage cohort that had had a first birth by a given age among all those who ever had a first birth. It also shows the equivalent cumulated proportions by age for those who had had their last birth.[5] Note where the woman has only one birth across her lifetime, the first and the last births coincide.

[5] Last birth was defined as including all of the following: if the woman had secondary infertility; if the woman or her husband had been sterilized; if the woman had reached menopause or had had a hysterectomy; if the woman was pregnant at the time of the IDHS and her pregnancy was unwanted for both husband and wife; if the woman was 40 years old or more and her last child was older than five years.

Age at first birth shifted upwards by a small amount from the 1960s marriage cohort to the 1970s cohort. The 50 per cent level was reached at age 17.1 years for the 1960 marriage cohort and by 18.4 years for the 1970s cohort. Thus, a secular trend to later childbearing was already underway prior to the revolution. However, the revolution brought an end to this trend and age at first birth hardly changed at all for the 1980s marriage cohort, although there were probably differences between the first half of the 1980s and the second half. In the 1990s, however, with the advance of female education and the shift to delay of the first birth within marriage, age at first birth rose considerably. For this cohort, the 50 per cent level was reached by age 20.8 years. Nevertheless, this is still relatively young for what is now a relatively highly educated population.

Figure 3. Proportion of women who had their first birth and their last birth by age and marriage cohort - Iran, IDHS 2000



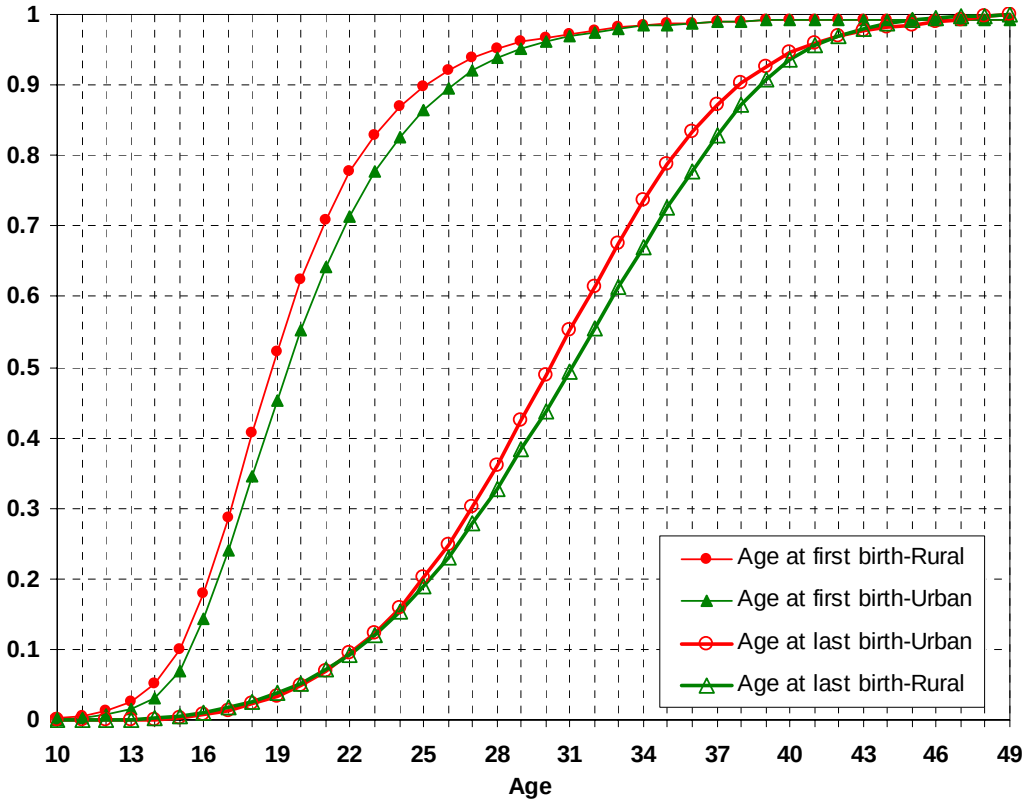
While age at first birth was moving up, age at last birth was moving down and by much larger amounts. The 50 per cent level for age at last birth was 35.7 years for the 1960s marriage cohort, 32.5 years for the 1970s cohort, 28.7 years for the 1980s cohort and 27.9 years for the 1990s cohort. There will be a small bias downward in the most recent cohort because the calculation is made only for those who have completed their childbearing. Despite this caveat, childbearing has evidently been truncated to a very short age range mainly in the early 20s. This gives rise to issues about the delivery of a family planning program to a population where a very substantial proportion of women complete their childbearing by age 25. It also raises issues about the ways in which this early cessation of childbearing will change

women's lives in a society where labour force participation rates for women have been low. We are now addressing these issues in the 2005 Iran Low Fertility Survey.

Age at first birth and age at last birth: regional and educational differences

Figure 4 indicates for all marriage cohorts combined the differences between age at first birth and age at last birth in rural and urban areas.

Figure 4. Proportion of women who had their first birth and their last birth by age and area of residence - Iran, IDHS 2000

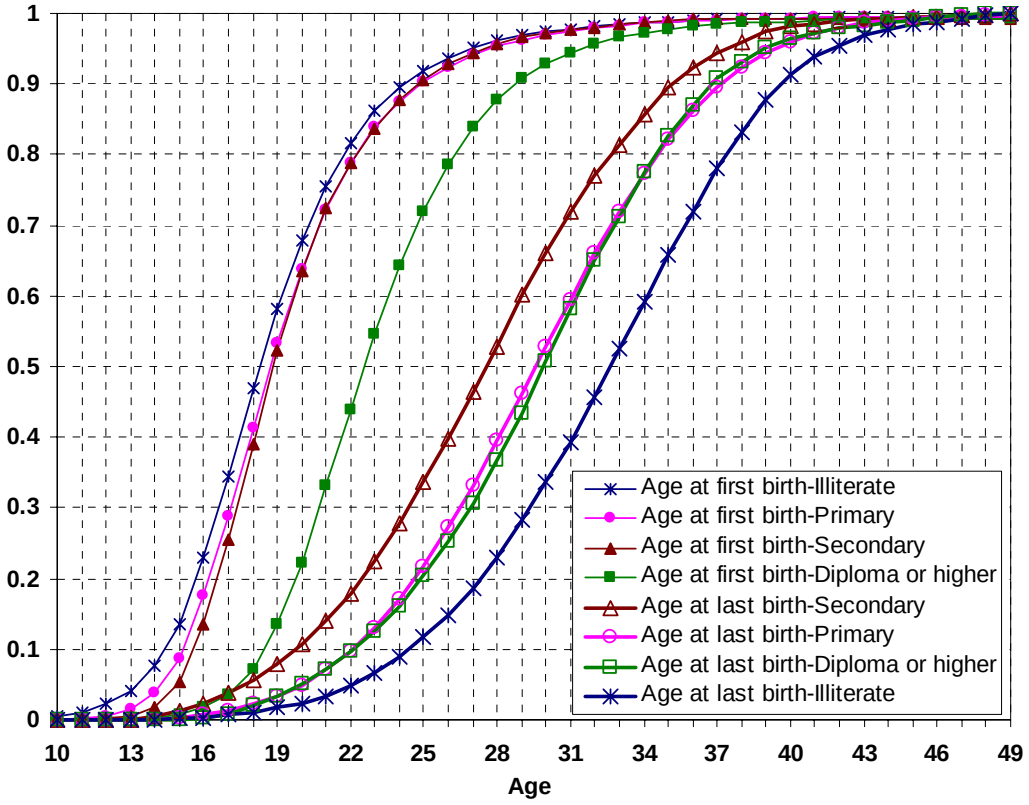


As expected, age at first birth is earlier in rural areas than in urban areas and age at last birth is later. However, the differences are smaller than might have been expected. This probably reflects the simultaneous extension of education to both rural and urban areas following the revolution and the ready availability of family planning services in rural areas after 1989. It also, of course, reflects relatively small fertility differentials between rural and urban areas.

Figure 5 shows the differences in starting and stopping by educational level of women for all marriage cohorts combined. There is almost no difference in the starting age between those who are illiterate, have primary education or have secondary education. Later age at first birth is associated only with tertiary education but then the increase is substantial (about four years older than the other groups on average). However, the three lower education categories differ markedly in the age at cessation of childbearing. Of course, this may be partly related to the simultaneity of time trends in

education and time trends in fertility over the 40 years prior to 2000, but the conclusion is strong that educational differences in fertility are related to stopping behaviour when education is below the tertiary level. Interestingly, age at last birth is lower for those with secondary education than it is for those with tertiary education reflecting the delay of first birth for the latter group of women.

Figure 5. Proportion of women who had their first birth and their last birth by age and educational level of women - Iran, IDHS 2000



Conclusion

In broad historical terms, analysis of fertility trends by parity provides similar conclusions to analysis of trends by age. However, the parity-specific analysis provides more detailed insights that cannot be observed using age analysis. More importantly, parity analysis provides measures that can be related more directly to behavioural responses than is the case with age specific fertility rates. This enhances interpretation of trends. We have observed in this paper that:

1. Despite the huge fall in fertility, there has been no change in the percentage of ever married Iranian women having no children. This percentage has remained around 6 per cent except for a slight rise during the years of the Iran-Iraq War.
2. Recently, from 1995 onwards, there is evidence that some couples have begun to delay the first birth within marriage. This may have arisen because social pressure for early marriage has remained strong but employment and income

opportunities for young people have become more problematic. Delay of the first birth within marriage is a rational response to this situation.

3. The percentage of women having one child remained at around 5 per cent prior to the reestablishment of the family planning program. Since then, the percentage stopping at one has increased sharply to reach 14 per cent reflective of the emergence of a one-child preference among a segment of the population.
4. There is also strong evidence of a widening of the interval between the first and the second birth post-1990.
5. A pattern of stopping at two commenced in the mid 1980s and accelerated in the 1990s in line with the trend in the total fertility rate.
6. The interval between the second and the third birth has been widening from the 1970s onwards. This interval was actually longer during the years of very high fertility in the early 1980s than it had been in the 1970s. This may have been due to attempts to control fertility when contraception was not readily available.
7. Where parity was already higher than two, the 'stop at two' phenomenon was matched by a stop at whatever parity a woman had. In other words, there is strong evidence of a cross-sectional cessation of childbearing for all women with parity two or more. The tendency to stop was greater as parity increased. These trends also tended to match the timing of movements in the total fertility rate. This trend is confirmed by the spectacular fall in age at last birth from the 1960s marriage cohort to the 1990s marriage cohort.
8. Age at first birth had been shifting upwards slowly prior to the revolution but this movement ceased in the 1980s. However, in the 1990s, there has been a sharp rise in age at first birth probably associated with the advance of tertiary education for women.
9. Differences in age at first birth between rural and urban areas have been small. This is probably because access to education and family planning was opened up simultaneously to all women across the country in the years following the revolution.
10. There are no differences in age at first birth among women with education levels of secondary level or below, however, tertiary education leads to a very sharp increase in age at first birth. This suggests that women who engage in tertiary education are provided with more freedom over their own family formation than is the case for those who do not continue education beyond secondary school. In a sense, involvement in tertiary education provides an acceptable reason for setting aside the normative Iranian pathway to early marriage and early childbearing. On the other hand, the age at last birth was highly associated with education level among those with secondary education or lower. For these women, age at last birth fell sharply as education levels rose. This shows that educational fertility differences are related strongly to differences in stopping behaviour.
11. Fertility decline has led to the concentration of childbearing into a much narrower range of ages. The interval between the median age at first birth and the median age at last birth fell from 18.6 years for the 1960s marriage cohort to around three years for the 1990s marriage cohort. Early cessation of childbearing raises policy issues in relation to the delivery of family planning and to the role of women.

Implications for future fertility trends

The next cohort of childbearing age in Iran is the very large cohort born in the early years of the revolution. It is very likely that this cohort will face major problems in job search despite its higher levels of education compared to previous generations. They are also likely to face high housing costs. Thus, we would expect this cohort to control its fertility at least to the same extent as the most recent cohort of childbearing age, and probably to a greater extent. For economic reasons, there will be strong pressure to delay the first birth and the advance of post-secondary school education will bolster this trend. This may be achieved through delay of marriage but the conservative nature of Iranian society will place limits on the extent to which age at marriage will rise. Thus the trend towards delay of the first birth within marriage is likely to continue and might also be promoted by the Iranian family planning programme. These trends will produce a continuance of a 'tempo' effect upon Iranian fertility, that is, births will be delayed to a future time. Accordingly, cross-sectional fertility can be expected to fall even more than it has already.

While this paper has not addressed provincial level trends, our other work (Abbasi-Shavazi and McDonald 2005) suggests that fertility rates are converging across provinces. This means that fertility will continue to fall in those provinces having higher fertility rates than the Iran average.

Taken together, the individual level trends and the provincial level trends are likely to lead to fertility in Iran falling well below replacement level in the coming years. This will coincide with the entry of the very large post-revolutionary birth cohort into the childbearing ages. Thus, fortuitously, in terms of the total number of births, the low fertility rate will not necessarily lead to further undercutting of the age distribution but to a dampening of the echo effect of the post-revolutionary cohort.

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Table 1. Synthetic parity cohort PPRs (Parity Progression Ratios) from marriage to the first birth – Iran, IDHS 2000

Birth year of the 1st births	Proportion of moving from marriage to the 1st birth in years after marriage											Synthetic parity cohort PPR
	0	1	2	3	4	5	6	7	8	9	10	
1971	0.0914											
1972	0.1063	0.1820										
1973	0.1059	0.1853	0.2519									
1974	0.1027	0.1976	0.2398	0.2490								
1975	0.1350	0.2243	0.2737	0.2979	0.2478							
1976	0.1124	0.2134	0.2771	0.2735	0.2696	0.2677						
1977	0.1108	0.2051	0.2500	0.2772	0.2887	0.2726	0.2421					
1978	0.1155	0.2209	0.2720	0.2824	0.3079	0.2192	0.1913	0.2077				
1979	0.1256	0.2214	0.3052	0.3212	0.2565	0.2954	0.2128	0.2153	0.1755			
1980	0.1311	0.2811	0.3562	0.3480	0.3165	0.2797	0.2228	0.2165	0.1808	0.0615		
1981	0.1290	0.2802	0.3587	0.3513	0.3196	0.2692	0.2410	0.1905	0.1519	0.1591	0.0696	0.9471
1982	0.1421	0.2854	0.3151	0.3825	0.2911	0.2030	0.1794	0.2173	0.1324	0.1819	0.0945	0.9395
1983	0.1208	0.2672	0.3412	0.3366	0.2937	0.2781	0.1838	0.1782	0.1319	0.0858	0.0600	0.9282
1984	0.1226	0.2753	0.3957	0.3838	0.2656	0.2882	0.1702	0.2061	0.0964	0.1458	0.0806	0.9421
1985	0.1153	0.2862	0.3491	0.3117	0.3302	0.2198	0.2125	0.1389	0.0866	0.1157	0.1161	0.9284
1986	0.1224	0.2867	0.4134	0.3613	0.3111	0.3252	0.1648	0.1576	0.1428	0.0873	0.0661	0.9439
1987	0.1188	0.2613	0.3910	0.3575	0.3195	0.2236	0.1251	0.1103	0.0648	0.0579	0.0424	0.9116
1988	0.1000	0.2465	0.3361	0.3558	0.2674	0.2078	0.1765	0.1067	0.1272	0.1090	0.0552	0.9090
1989	0.1046	0.2424	0.3629	0.3429	0.3163	0.1967	0.1543	0.1427	0.1100	0.0384	0.0947	0.9124
1990	0.0924	0.2962	0.3596	0.3810	0.2959	0.2225	0.1757	0.1488	0.0408	0.0958	0.0630	0.9210
1991	0.1053	0.2812	0.3953	0.4187	0.3064	0.2179	0.2278	0.1907	0.0720	0.0911	0.0529	0.9388
1992	0.0862	0.2636	0.3963	0.3971	0.3154	0.2392	0.1652	0.0946	0.1041	0.0843	0.0750	0.9268
1993	0.1036	0.2694	0.4119	0.3542	0.3408	0.2427	0.1896	0.1364	0.1026	0.0700	0.0550	0.9315
1994	0.1042	0.2867	0.4242	0.4019	0.3670	0.2840	0.1953	0.0920	0.1035	0.0575	0.0600	0.9421
1995	0.0779	0.2878	0.3963	0.4190	0.3344	0.2773	0.2436	0.0993	0.0985	0.0691	0.0476	0.9397
1996	0.0893	0.2652	0.3935	0.4016	0.2863	0.2395	0.1590	0.1044	0.1240	0.0946	0.0574	0.9258
1997	0.0667	0.2571	0.3617	0.3781	0.3821	0.2569	0.1919	0.1787	0.1105	0.1252	0.0301	0.9367
1998	0.0515	0.2413	0.4034	0.3823	0.2804	0.2826	0.1869	0.1453	0.0555	0.0333	0.1286	0.9243
1999	0.0307	0.2578	0.3839	0.4257	0.3766	0.2533	0.1895	0.1382	0.0916	0.0607	0.0314	0.9316
2000	0.0090	0.1719	0.3317	0.3418	0.3497	0.2218	0.1490	0.1069	0.0744	0.0698	0.0688	0.8887

Table 2. Synthetic parity cohort PPRs (Parity Progression Ratios) from the first birth to the second birth – Iran, IDHS 2000

Birth year of the 2nd births	Proportion of moving from the 1st birth to the 2nd birth in years after having the 1st birth											Synthetic parity cohort PPR
	0	1	2	3	4	5	6	7	8	9	10	
1971	0.0197											
1972	0.0252	0.2428										
1973	0.0141	0.2634	0.4724									
1974	0.0210	0.2612	0.4292	0.4324								
1975	0.0226	0.2828	0.3966	0.4160	0.3874							
1976	0.0243	0.2823	0.4947	0.4367	0.3839	0.2454						
1977	0.0169	0.2626	0.4519	0.4091	0.3334	0.3330	0.1844					
1978	0.0242	0.2625	0.4586	0.4289	0.4492	0.2044	0.2068	0.2164				
1979	0.0199	0.2690	0.4786	0.4520	0.4171	0.3925	0.2381	0.0839	0.1387			
1980	0.0256	0.2776	0.4475	0.4433	0.4445	0.3612	0.1906	0.1985	0.0705	0.0463		
1981	0.0179	0.2727	0.4849	0.4185	0.3724	0.3326	0.1575	0.1304	0.1664	0.0833	0.0179	0.9507
1982	0.0203	0.2351	0.4446	0.4154	0.3826	0.3312	0.2054	0.1576	0.0855	0.1212	0.0578	0.9491
1983	0.0164	0.2590	0.4396	0.5049	0.4159	0.3848	0.2209	0.2204	0.0941	0.0907	0.0620	0.9659
1984	0.0192	0.2672	0.4921	0.4362	0.4227	0.3386	0.1932	0.0840	0.0553	0.1117	0.0411	0.9533
1985	0.0181	0.2379	0.4658	0.4320	0.3669	0.2890	0.2066	0.1516	0.0881	0.0588	0.0027	0.9411
1986	0.0205	0.2333	0.4434	0.4426	0.3603	0.3498	0.2542	0.1142	0.1153	0.1062	0.0293	0.9509
1987	0.0144	0.2069	0.3960	0.3882	0.3576	0.2484	0.1904	0.1277	0.0628	0.0743	0.0016	0.9147
1988	0.0257	0.2041	0.3969	0.3703	0.3838	0.2635	0.2232	0.1222	0.0470	0.1010	0.0277	0.9241
1989	0.0259	0.2159	0.4114	0.3466	0.3359	0.3234	0.2976	0.1123	0.1181	0.0429	0.0097	0.9312
1990	0.0207	0.1697	0.3652	0.4212	0.3170	0.2748	0.2909	0.2477	0.1692	0.1078	0.0149	0.9424
1991	0.0237	0.1532	0.3517	0.3011	0.2886	0.2877	0.2937	0.1557	0.1000	0.0272	0.0595	0.9068
1992	0.0219	0.1308	0.2777	0.2810	0.2812	0.2494	0.2452	0.1968	0.2160	0.0435	0.0832	0.9007
1993	0.0219	0.1360	0.2556	0.2494	0.2924	0.3140	0.2942	0.1622	0.1513	0.0829	0.0103	0.8956
1994	0.0146	0.1164	0.2377	0.2385	0.2854	0.3403	0.2599	0.2130	0.1374	0.0794	0.0528	0.8956
1995	0.0124	0.0927	0.2037	0.2087	0.2452	0.2363	0.2679	0.1980	0.1537	0.1121	0.1128	0.8726
1996	0.0177	0.0891	0.1836	0.1942	0.2213	0.2346	0.2766	0.2986	0.2141	0.1056	0.1324	0.8914
1997	0.0111	0.0694	0.1759	0.1858	0.1847	0.2501	0.2285	0.2045	0.1712	0.1191	0.0990	0.8476
1998	0.0111	0.0571	0.1595	0.1830	0.1962	0.2486	0.2248	0.2553	0.2177	0.1918	0.0764	0.8696
1999	0.0129	0.0517	0.1316	0.1822	0.1877	0.2270	0.2317	0.2731	0.1849	0.1406	0.1032	0.8536
2000	0.0092	0.0274	0.0911	0.1091	0.1491	0.1743	0.1721	0.1812	0.1785	0.1779	0.0801	0.7692

Table 3. Synthetic parity cohort PPRs (Parity Progression Ratios) from the second birth to the third birth – Iran, IDHS 2000

Birth year of the 3rd births	Proportion of moving from the 2nd birth to the 3rd birth in years after having the 2nd birth											Synthetic parity cohort PPR
	0	1	2	3	4	5	6	7	8	9	10	
1971	0.0142											
1972	0.0166	0.2138										
1973	0.0312	0.1865	0.3903									
1974	0.0264	0.1887	0.3948	0.4585								
1975	0.0242	0.2234	0.3871	0.3728	0.2857							
1976	0.0234	0.2122	0.4275	0.3568	0.3949	0.4727						
1977	0.0130	0.2212	0.3831	0.3977	0.3448	0.3001	0.3053					
1978	0.0186	0.2140	0.3703	0.3856	0.3949	0.3538	0.2830	0.2633				
1979	0.0169	0.2071	0.3645	0.4102	0.3543	0.3254	0.3205	0.2443	0.1173			
1980	0.0233	0.2066	0.3821	0.4271	0.4197	0.3247	0.2666	0.2966	0.4363	0.0919		
1981	0.0189	0.1722	0.3559	0.3781	0.3752	0.2263	0.4378	0.3556	0.1413	0.1080	0.1862	0.9645
1982	0.0146	0.1522	0.3391	0.4269	0.3262	0.3754	0.3480	0.3105	0.2614	0.1228	0.1224	0.9660
1983	0.0160	0.1686	0.3613	0.3872	0.3682	0.3516	0.2844	0.3192	0.1540	0.1236	0.0522	0.9551
1984	0.0173	0.1896	0.3975	0.3938	0.4212	0.3269	0.2430	0.2703	0.3802	0.0762	0.0294	0.9652
1985	0.0176	0.1569	0.3563	0.4054	0.3242	0.3806	0.2971	0.2073	0.0865	0.1398	0.1281	0.9493
1986	0.0156	0.1671	0.3476	0.3519	0.2846	0.3071	0.2296	0.1725	0.2750	0.3006	0.1111	0.9506
1987	0.0177	0.1282	0.3351	0.3141	0.2770	0.2909	0.2164	0.1668	0.0707	0.2346	0.1660	0.9225
1988	0.0171	0.1280	0.2804	0.3302	0.2190	0.2382	0.1895	0.1588	0.1034	0.1831	0.0263	0.8805
1989	0.0102	0.1187	0.2993	0.2826	0.2621	0.2060	0.2046	0.2072	0.1305	0.1495	0.0544	0.8867
1990	0.0134	0.1215	0.2927	0.2902	0.2182	0.2688	0.1787	0.1993	0.1363	0.1100	0.0214	0.8769
1991	0.0048	0.1007	0.2436	0.2357	0.1963	0.1454	0.1672	0.2156	0.1932	0.1242	0.0766	0.8485
1992	0.0113	0.0785	0.2235	0.2196	0.1703	0.1559	0.1581	0.1415	0.1786	0.1336	0.0464	0.8104
1993	0.0186	0.0741	0.1976	0.2018	0.1480	0.1533	0.1449	0.0983	0.1530	0.1084	0.0332	0.7637
1994	0.0091	0.0626	0.1602	0.1718	0.1615	0.1070	0.1012	0.1082	0.0917	0.0735	0.0410	0.6872
1995	0.0095	0.0553	0.1382	0.1413	0.1422	0.0898	0.0992	0.1046	0.1378	0.0453	0.1006	0.6772
1996	0.0188	0.0494	0.1072	0.1298	0.1012	0.1014	0.1022	0.1005	0.1173	0.0678	0.0317	0.6234
1997	0.0124	0.0332	0.1228	0.1328	0.1155	0.1073	0.1093	0.0719	0.0912	0.1121	0.0597	0.6403
1998	0.0115	0.0361	0.0858	0.1362	0.0915	0.1072	0.0765	0.1025	0.1055	0.0921	0.0596	0.6137
1999	0.0157	0.0267	0.0884	0.1111	0.0873	0.1058	0.1163	0.0830	0.0722	0.0719	0.1003	0.6023
2000	0.0125	0.0117	0.0536	0.0766	0.0984	0.0825	0.0809	0.0784	0.0675	0.0366	0.0467	0.4882

Table 4. Synthetic parity cohort PPRs (Parity Progression Ratios) from the third birth to the fourth birth – Iran, IDHS 2000

Birth year of the 4th births	Proportion of moving from the 3rd birth to the 4th birth in years after having the 3rd birth											Synthetic parity cohort PPR
	0	1	2	3	4	5	6	7	8	9	10	
1971	0.0091											
1972	0.0334	0.2134										
1973	0.0250	0.2414	0.3068									
1974	0.0147	0.2507	0.3778	0.3116								
1975	0.0262	0.2111	0.3838	0.3363	0.3901							
1976	0.0213	0.1721	0.3531	0.3598	0.4271	0.3368						
1977	0.0311	0.1810	0.4203	0.3716	0.4339	0.1779	0.1674					
1978	0.0236	0.1974	0.3852	0.4695	0.3504	0.4315	0.3432	0.3212				
1979	0.0214	0.1904	0.3580	0.3869	0.3070	0.3701	0.3132	0.2097	0.4666			
1980	0.0158	0.1825	0.3790	0.4008	0.4354	0.3279	0.2120	0.2115	0.2675	0.1440		
1981	0.0223	0.1917	0.4095	0.4365	0.3635	0.3335	0.3982	0.2992	0.2206	0.2019	0.2969	0.9794
1982	0.0205	0.1901	0.3391	0.3692	0.3670	0.3304	0.2084	0.2276	0.2316	0.2213	0.1061	0.9542
1983	0.0165	0.1497	0.3788	0.3896	0.3905	0.3551	0.3115	0.4020	0.1607	0.0708	0.3342	0.9734
1984	0.0179	0.1740	0.3794	0.4513	0.3479	0.2910	0.2301	0.2451	0.1203	0.1379	0.0649	0.9474
1985	0.0213	0.1434	0.3535	0.3481	0.3501	0.2979	0.3176	0.2865	0.1883	0.0710	0.0438	0.9434
1986	0.0159	0.1568	0.3515	0.3850	0.2879	0.3275	0.2360	0.2265	0.1926	0.1755	0.0149	0.9386
1987	0.0176	0.1158	0.2884	0.2950	0.3129	0.2394	0.1994	0.1075	0.0673	0.0881	0.0413	0.8673
1988	0.0099	0.1065	0.2834	0.3019	0.2347	0.2255	0.2027	0.1220	0.1328	0.0577	0.0987	0.8648
1989	0.0175	0.1219	0.2905	0.2896	0.2085	0.2181	0.2099	0.2399	0.1930	0.0460	0.0584	0.8828
1990	0.0178	0.1034	0.2455	0.3011	0.2374	0.1821	0.2293	0.1342	0.2937	0.1265	0.0348	0.8849
1991	0.0133	0.0926	0.2257	0.2428	0.1807	0.1441	0.1444	0.1605	0.0949	0.0353	0.0152	0.7726
1992	0.0190	0.0818	0.1954	0.2164	0.1693	0.1838	0.1197	0.0807	0.0960	0.1057	0.0470	0.7599
1993	0.0159	0.0696	0.1682	0.1780	0.1374	0.1401	0.1035	0.1037	0.0800	0.0649	0.0326	0.6895
1994	0.0209	0.0642	0.1611	0.1707	0.1246	0.0811	0.0996	0.0769	0.0971	0.0269	0.0550	0.6461
1995	0.0116	0.0502	0.1361	0.1465	0.1603	0.0785	0.0793	0.0844	0.0669	0.0826	0.0338	0.6266
1996	0.0188	0.0501	0.1406	0.1519	0.0935	0.0651	0.0813	0.0592	0.0339	0.0330	0.0181	0.5435
1997	0.0208	0.0325	0.1358	0.1376	0.1059	0.0757	0.0854	0.0871	0.0684	0.0558	0.0364	0.5871
1998	0.0139	0.0373	0.0895	0.1390	0.1037	0.0933	0.0748	0.0563	0.0921	0.0620	0.0461	0.5710
1999	0.0130	0.0385	0.0918	0.1122	0.0848	0.0629	0.0793	0.0658	0.0529	0.0256	0.0396	0.4997
2000	0.0104	0.0141	0.0544	0.0672	0.0777	0.0644	0.0685	0.0506	0.0518	0.0352	0.0260	0.4148

Table 5. Synthetic parity cohort PPRs (Parity Progression Ratios) from the fourth birth to the fifth birth – Iran, IDHS 2000

Birth year of the 5th births	Proportion of moving from the 4th birth to the 5th birth in years after having the 4th birth											Synthetic parity cohort PPR
	0	1	2	3	4	5	6	7	8	9	10	
1971	0.0135											
1972	0.0120	0.2296										
1973	0.0337	0.2732	0.2987									
1974	0.0209	0.1865	0.3484	0.3872								
1975	0.0145	0.1754	0.4528	0.5025	0.3561							
1976	0.0284	0.2024	0.4033	0.3485	0.3411	0.2774						
1977	0.0203	0.1665	0.3398	0.3568	0.2568	0.3956	0.1808					
1978	0.0252	0.1922	0.3536	0.3765	0.3667	0.2070	0.2689	0.0565				
1979	0.0321	0.1753	0.3588	0.4191	0.3828	0.3602	0.2706	0.0543	0.1114			
1980	0.0142	0.1862	0.3628	0.4428	0.3482	0.3876	0.2519	0.3021	0.0834	0.1542		
1981	0.0247	0.1701	0.3449	0.4242	0.3541	0.3335	0.4236	0.2689	0.2164	0.0880	0.3436	0.9740
1982	0.0245	0.1436	0.3472	0.4295	0.4106	0.3686	0.2658	0.4938	0.0526	0.0000	0.5462	0.9815
1983	0.0146	0.1758	0.3561	0.4663	0.4101	0.4321	0.1374	0.3259	0.2763	0.1316	0.2196	0.9733
1984	0.0148	0.1473	0.3880	0.3968	0.3879	0.3364	0.2728	0.1844	0.1164	0.1518	0.0423	0.9464
1985	0.0117	0.1709	0.3658	0.4439	0.3253	0.3444	0.2924	0.3223	0.0872	0.1114	0.0000	0.9503
1986	0.0216	0.1511	0.3405	0.4134	0.3239	0.2234	0.1645	0.2069	0.2263	0.2039	0.1358	0.9405
1987	0.0245	0.1272	0.3001	0.3740	0.2569	0.2108	0.2015	0.2371	0.2790	0.2096	0.0953	0.9313
1988	0.0157	0.1267	0.2890	0.3387	0.2645	0.2066	0.2068	0.2263	0.0772	0.1048	0.0603	0.8876
1989	0.0129	0.1041	0.2927	0.3480	0.2349	0.2017	0.1615	0.1528	0.1524	0.1026	0.1127	0.8806
1990	0.0137	0.0860	0.2478	0.3028	0.2444	0.1636	0.1322	0.1163	0.0911	0.0686	0.2012	0.8451
1991	0.0116	0.0847	0.2117	0.2846	0.1815	0.1097	0.1362	0.1357	0.1006	0.1020	0.0519	0.7874
1992	0.0078	0.0717	0.1926	0.1948	0.1537	0.1207	0.0857	0.1142	0.0641	0.0378	0.0879	0.7036
1993	0.0116	0.0774	0.1879	0.1898	0.1234	0.1073	0.0905	0.0769	0.0800	0.0288	0.0490	0.6650
1994	0.0163	0.0599	0.1621	0.1865	0.0923	0.1063	0.1096	0.0484	0.0345	0.0396	0.0313	0.6108
1995	0.0164	0.0546	0.1444	0.1331	0.1060	0.0840	0.0670	0.0406	0.0595	0.0296	0.0437	0.5587
1996	0.0178	0.0493	0.1407	0.1251	0.0649	0.0656	0.0657	0.0543	0.0517	0.0137	0.0255	0.5060
1997	0.0285	0.0524	0.1317	0.1330	0.0908	0.0596	0.0442	0.0352	0.0356	0.0267	0.0097	0.4920
1998	0.0082	0.0255	0.1109	0.1005	0.0807	0.0753	0.0390	0.0402	0.0435	0.0339	0.0306	0.4571
1999	0.0152	0.0194	0.0945	0.1313	0.0835	0.0566	0.0632	0.0451	0.0447	0.0208	0.0314	0.4677
2000	0.0088	0.0181	0.0635	0.0693	0.0796	0.0453	0.0468	0.0297	0.0331	0.0267	0.0097	0.3575

Table 6. Synthetic parity cohort PPRs (Parity Progression Ratios) from the fifth birth to the sixth birth – Iran, IDHS 2000

Birth year of the 6th births	Proportion of moving from the 5th birth to the 6th birth in years after having the 5th birth											Synthetic parity cohort PPR
	0	1	2	3	4	5	6	7	8	9	10	
1971	0.0000											
1972	0.0177	0.3500										
1973	0.0618	0.1648	0.3890									
1974	0.0127	0.1897	0.2517	0.1469								
1975	0.0168	0.1818	0.4369	0.3389	0.0000							
1976	0.0107	0.2536	0.3505	0.4835	0.2375	0.3941						
1977	0.0087	0.1770	0.3197	0.4053	0.3575	0.1933	0.1655					
1978	0.0187	0.1390	0.2744	0.2789	0.1477	0.4419	0.1992	0.4692				
1979	0.0176	0.1811	0.3491	0.4564	0.4271	0.4005	0.2514	0.1433	0.0000			
1980	0.0227	0.1505	0.3161	0.4871	0.4973	0.3609	0.1461	0.0934	0.4727	0.5935		
1981	0.0202	0.1960	0.3995	0.4066	0.2664	0.1561	0.3830	0.2942	0.0000	0.5269	0.0000	0.9642
1982	0.0192	0.1621	0.4013	0.4238	0.2928	0.2344	0.2038	0.3329	0.3934	0.1360	0.5568	0.9811
1983	0.0212	0.1457	0.3487	0.4114	0.5068	0.2076	0.2393	0.1075	0.2157	0.0815	0.0000	0.9387
1984	0.0162	0.1511	0.3221	0.4475	0.4638	0.3275	0.1497	0.2029	0.0000	0.3446	0.0756	0.9537
1985	0.0177	0.1184	0.3630	0.4350	0.3440	0.3601	0.4483	0.1013	0.0999	0.0734	0.0000	0.9459
1986	0.0198	0.1497	0.3523	0.3849	0.2779	0.1428	0.1684	0.3693	0.1549	0.1056	0.3029	0.9432
1987	0.0111	0.1169	0.3345	0.4048	0.3248	0.2740	0.0873	0.1409	0.0956	0.0819	0.0459	0.8947
1988	0.0207	0.1050	0.3121	0.3310	0.2657	0.2400	0.2253	0.1637	0.2649	0.2166	0.0350	0.9189
1989	0.0121	0.0895	0.2880	0.3472	0.2653	0.2875	0.1758	0.1617	0.0870	0.0656	0.0000	0.8710
1990	0.0149	0.0789	0.2816	0.3242	0.1990	0.1517	0.1193	0.0785	0.1611	0.0988	0.0699	0.8292
1991	0.0257	0.0888	0.2479	0.2789	0.1803	0.1242	0.1032	0.1421	0.0911	0.1181	0.0083	0.7886
1992	0.0127	0.0578	0.1928	0.2206	0.1554	0.1067	0.0637	0.0983	0.0372	0.0689	0.0239	0.6738
1993	0.0141	0.0653	0.1816	0.1951	0.1348	0.1450	0.0846	0.0660	0.0835	0.0238	0.0734	0.6817
1994	0.0198	0.0546	0.1799	0.1677	0.1036	0.0971	0.0933	0.0784	0.0499	0.0276	0.0029	0.6059
1995	0.0126	0.0543	0.1547	0.1646	0.0958	0.0812	0.0476	0.0424	0.0331	0.0240	0.0281	0.5418
1996	0.0101	0.0428	0.1050	0.1496	0.0988	0.0952	0.0504	0.0374	0.0218	0.0139	0.0376	0.5011
1997	0.0113	0.0348	0.1275	0.1262	0.0985	0.0818	0.0437	0.0273	0.0235	0.0299	0.0211	0.4805
1998	0.0122	0.0293	0.1285	0.1302	0.0774	0.0614	0.0711	0.0464	0.0283	0.0195	0.0305	0.4850
1999	0.0051	0.0217	0.0852	0.1121	0.0743	0.0661	0.0352	0.0267	0.0213	0.0190	0.0220	0.3974
2000	0.0077	0.0058	0.0768	0.1136	0.0629	0.0320	0.0498	0.0339	0.0240	0.0146	0.0100	0.3599

Table 7. Synthetic parity cohort PPRs (Parity Progression Ratios) from the sixth birth to the seventh birth – Iran, IDHS 2000

Birth year of the 7th births	Proportion of moving from the 6th birth to the 7th birth in years after having the 6th birth											Synthetic parity cohort PPR
	0	1	2	3	4	5	6	7	8	9	10	
1971	0.1399											
1972	0.0000	0.1762										
1973	0.1598	0.0987	0.2725									
1974	0.0304	0.3191	0.3072	0.0000								
1975	0.0465	0.2674	0.2843	0.2128	0.0000							
1976	0.0321	0.2253	0.3661	0.5010	0.0682	0.2177						
1977	0.0237	0.1582	0.1176	0.2829	0.4351	0.0145	0.0000					
1978	0.0228	0.1487	0.2503	0.2766	0.2465	0.0657	0.0000	0.0601				
1979	0.0151	0.2094	0.3116	0.2855	0.1714	0.1508	0.2658	0.1201	0.0000			
1980	0.0204	0.2060	0.3576	0.3335	0.1645	0.3656	0.1161	0.0000	0.0769	0.0000		
1981	0.0394	0.1628	0.2957	0.3394	0.3574	0.2179	0.0000	0.2732	0.0000	0.0000	0.0000	0.8633
1982	0.0213	0.1681	0.3314	0.3097	0.3894	0.3391	0.1606	0.1965	0.0000	0.0958	0.0000	0.9075
1983	0.0144	0.1695	0.3329	0.3781	0.3797	0.4786	0.2205	0.2693	0.0789	0.0320	1.0000	1.0000
1984	0.0250	0.1474	0.3501	0.4338	0.3626	0.3872	0.2940	0.2575	0.0193	0.0000	0.0000	0.9386
1985	0.0199	0.1413	0.3565	0.4047	0.3427	0.2935	0.2693	0.2949	0.0742	0.1719	0.0406	0.9432
1986	0.0195	0.1365	0.3564	0.4085	0.3826	0.3290	0.1066	0.1665	0.5632	0.0365	0.0301	0.9594
1987	0.0295	0.1163	0.3009	0.3760	0.3004	0.1807	0.1148	0.1944	0.2198	0.3319	0.2337	0.9389
1988	0.0200	0.1309	0.3174	0.3717	0.3026	0.2377	0.2675	0.1986	0.1383	0.0088	0.0000	0.9026
1989	0.0104	0.1073	0.2965	0.3733	0.2268	0.2306	0.1708	0.2448	0.1593	0.0643	0.1064	0.8980
1990	0.0217	0.1056	0.2551	0.3337	0.2801	0.2153	0.1527	0.1758	0.0506	0.0000	0.0082	0.8387
1991	0.0265	0.0874	0.2368	0.2719	0.1614	0.1527	0.1047	0.0723	0.0357	0.1466	0.1649	0.7998
1992	0.0135	0.0823	0.1836	0.1899	0.1632	0.1225	0.0998	0.0827	0.0967	0.0513	0.0234	0.6962
1993	0.0182	0.0703	0.1844	0.2039	0.1361	0.1057	0.0592	0.0738	0.0649	0.0451	0.0314	0.6549
1994	0.0162	0.0661	0.1602	0.1653	0.1463	0.0949	0.0730	0.0207	0.0477	0.0103	0.0125	0.5795
1995	0.0259	0.0307	0.1355	0.1730	0.1095	0.0923	0.0552	0.0337	0.0483	0.0407	0.0075	0.5486
1996	0.0163	0.0387	0.1113	0.1303	0.0977	0.0828	0.0643	0.0184	0.0149	0.0312	0.0000	0.4697
1997	0.0136	0.0373	0.1300	0.1307	0.0518	0.0591	0.0557	0.0371	0.0264	0.0022	0.0071	0.4380
1998	0.0137	0.0454	0.1012	0.0906	0.0879	0.0501	0.0454	0.0319	0.0401	0.0166	0.0019	0.4196
1999	0.0164	0.0260	0.0815	0.0983	0.0663	0.0693	0.0483	0.0299	0.0215	0.0127	0.0088	0.3905
2000	0.0154	0.0069	0.0801	0.0876	0.0626	0.0372	0.0559	0.0465	0.0215	0.0083	0.0087	0.3586

Appendix Table 1. True parity cohort and synthetic parity cohort PPRs (based on 10 years' cumulated experience), Progressions M (Marriage) -1 to 5-6, Iran, IDHS 2000.

Birth year of parity X	True parity cohort PPR						Birth year of parity X+1	Synthetic parity cohort PPR					
	M - 1	1 - 2	2 - 3	3 - 4	4 - 5	5 - 6		M - 1	1 - 2	2 - 3	3 - 4	4 - 5	5 - 6
1971	0.901	0.947	0.968	0.973	0.942	0.963							
1972	0.918	0.943	0.969	0.961	0.976	0.981							
1973	0.915	0.945	0.955	0.980	0.949	0.954							
1974	0.919	0.961	0.968	0.952	0.946	0.951							
1975	0.924	0.953	0.966	0.963	0.978	0.972							
1976	0.912	0.958	0.973	0.957	0.956	0.938							
1977	0.912	0.949	0.969	0.958	0.947	0.926							
1978	0.920	0.953	0.958	0.959	0.972	0.895							
1979	0.937	0.952	0.949	0.944	0.963	0.976							
1980	0.905	0.953	0.944	0.920	0.952	0.957							
1981	0.932	0.949	0.929	0.942	0.921	0.897	**1981**	0.947	0.951	0.965	0.979	0.974	0.964
1982	0.920	0.949	0.931	0.928	0.927	0.921	**1982**	0.940	0.949	0.966	0.954	0.982	0.981
1983	0.917	0.954	0.921	0.908	0.888	0.901	**1983**	0.928	0.966	0.955	0.973	0.973	0.939
1984	0.927	0.957	0.896	0.881	0.869	0.876	**1984**	0.942	0.953	0.965	0.947	0.946	0.954
1985	0.926	0.946	0.901	0.819	0.839	0.838	**1985**	0.928	0.941	0.949	0.943	0.950	0.946
1986	0.912	0.937	0.811	0.815	0.795	0.787	**1986**	0.944	0.951	0.951	0.939	0.941	0.943
1987	0.919	0.946	0.833	0.791	0.760	0.754	**1987**	0.912	0.915	0.923	0.867	0.931	0.895
1988	0.936	0.937	0.805	0.746	0.726	0.734	**1988**	0.909	0.924	0.881	0.865	0.888	0.919
1989	0.939	0.946	0.765	0.692	0.643	0.642	**1989**	0.912	0.931	0.887	0.883	0.881	0.871
1990	0.934	0.913	0.723	0.656	0.590	0.581	**1990**	0.921	0.942	0.877	0.885	0.845	0.829
							1991	0.939	0.907	0.849	0.773	0.787	0.789
							1992	0.927	0.901	0.810	0.760	0.704	0.674
							1993	0.931	0.896	0.764	0.690	0.665	0.682
							1994	0.942	0.896	0.687	0.646	0.611	0.606
							1995	0.940	0.873	0.677	0.627	0.559	0.542
							1996	0.926	0.891	0.623	0.544	0.506	0.501
							1997	0.937	0.848	0.640	0.587	0.492	0.481
							1998	0.924	0.870	0.614	0.571	0.457	0.485
							1999	0.932	0.854	0.602	0.500	0.468	0.397
							2000	0.889	0.769	0.488	0.415	0.358	0.360