The extent of the fertility decline in Russia: is the one-child family here to stay?

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FIRST DRAFT
How fertility has fallen in Russia and the reasons for the fall

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Context: below-replacement fertility or fertility decreasing?

In the modern history of Russia the year 1992 was marked by two important events. First of all, at the beginning of this year the Government started a cardinal reform of the economic system. The economic “choc therapy” provoked the growth of prices and enormous inflation: two phenomena that were absolutely unknown for 80% of the Russian population up to then. Secondly, in 1992, for the first time in peacetime, the annual number of death exceeded the number of births. This coincidence was mostly fortuitous, and the monthly balance of deaths and births was negative since November 1991 (and October 1991 for the urban population).

Nevertheless these two events, namely negative natural population growth and the introduction of economic reforms, not only determined the social and economic context of the problem of below-replacement fertility, but also suggested that there was a strong causal relationship between the two.

In the ensuing debate, the adversaries of the Russian society reforms or those, who do not agree with the methods of reform, argue that the cause of the dramatic fertility decrease is the hasty and unreasonable economic reforms. The opposite point of view is that the demographic situation in Russia in the 1990s is the natural result of long-term trends, and that the economic transformation only “accelerated the coming of the second demographic transition.” (Darsky and Bondarskaya, 1995, p.6). The details of this debate will not be stated here; they were clarified by S.Zakharov. (Zakharov, 1997, Zakharov, 1997) We would simply like to pay attention to the fact that this discussion contributes much to creating a paradigm of demographic discourse in which below-replacement fertility as a social phenomenon is shifting to the background and all
attention is concentrated on the process of fertility decline in the very short period of the early 1980s – mid-1990s.

Recent investigations have shown that the below-replacement fertility was established in Russia on a permanent basis as early as the late 1960s. (Avdeev and Monnnier, 1995 and 1996; Scherbov and Vianen, 1999). But until the beginning of the last decade the fertility decline was not so visible. Actually, after the important fall during the 1960s, a relative stabilization of TFR at “a little bit” below replacement level was observed during the 1970s, in contrast with the crude birth rate, which was increasing at the same time. In the 1980s, the new family policy stimulated a huge growth of TFR.

Moreover, up to the end of the 1980s, the Russian and Soviet demographers were unable to conduct any detailed investigations of fertility trends because of lack or unavailability of vital statistics for their research. Importantly, the first Soviet Demographic Yearbook after the Second World War was published only in 1973 and it was very concise. The next one appeared only 15 years later in 1988. No wonder the demographers were disarmed when the fertility problems emerged and the TFR started to fall in 1988.

It is very important to take into consideration that the fertility decrease in Russia followed a strong short-run increase, and this fact blurred the general picture. So at first the fertility decline was considered as offsetting this earlier growth. (Darsky, 1993). Apparently very reasonable, this explanation implied the expectation that fertility would soon “catch up” again and stabilize at the end of 1990s at about the level observed in the 1970s. (Barkalov and Darsky, 1994, p.13). These illusions were broken by the reality, although the hopes that an upturn would occur remained present. Thus a social attitude that could be called “demographic optimism” has constituted a third element of the general context of the social perception of below-replacement fertility in Russia on the threshold of the XXIth century.

Throughout the last decade the fertility decline in Russia was the object of numerous studies by Russian demographers (Andreev, Bondarskaia and Kharkova, 1998, Darsky, 1993,
Darsky and Bondarskaya, 1995; Zakharov, 1997 and 1999; Zakharov and Ivanova, 1996 and 1996b; as well as by western researchers and mixed teams (Avdeev and Monnier, 1994/95; 1999/2000; Barkalov and Darsky, 1994; Philipov and Kohler, 1998; Scherbov and van Vianen, 1999). Although all these investigations describe in depth the recent fertility changes, the causes and prospects remain scientifically unexplained. Three main theoretical statements are present in most of these studies:

1) the economic and social crisis (this term is usually used as a synonym for the social transformation) is not a main cause of fertility decline, but it accelerated the second demographic transition;

2) at least in the first half of the 1990s the reduction of TFR is mostly due to the effect of compensation and the level of cohort completed fertility might be holding;

3) the main cause of the period fertility decline is the change in the age fertility schedule of cohorts or, in others words, the transition from young and highly concentrated fertility to later and more widely spread fertility, like that observed in the western countries. In our analysis the arguments for and against each of these statements will be discussed.

**Main Features of Below-Replacement Fertility in Russia**

Although there are no reliable data that could allow the direct estimation of age specific fertility rates in Russia for the period prior to the 1959 census, recent studies based on demographic modeling (Andreev, Darsky, Kharkova, 1998) or on the 1994 micro-census data (Scherbov and van Vianen, 1999) have given us an idea about the fertility decline in the 1950s. In that decade TFR decreased from 2.9 to 2.6, and the completed fertility of the women born between 1924 and 1930, whose behavior determined the period fertility indicators in the 1950s and 1960s, was gradually reduced from 2.1 to 2.02. Figure 1, which presents the dynamics of these period and cohort fertility indicators, shows clearly that Russia became a low-fertility country by the end of the 1950s. So the two-child family as a common model of reproductive behaviour was established in Russia not in the latter 1960s, but at least 10 years earlier.
The relatively important TFR decline between 1959 and 1968 was determined by two factors. The first was acceleration in the decline of fertility in the countryside. In 1959 the TFR for the rural population was 3.3. By 1968 it had decreased to 2.5 or by 23%. The urban population TFR decreased only by 15% (from 2.0 in 1959 to 1.7 in 1968). At the same time the proportion of the rural population diminished from 47% to 37% of the total Russian population. This structural change was the second factor of the acceleration of the TFR decline in 1959-1968. The latter factor kept this role for the next decade when the proportion of rural population continued to fall to 30%. Because of this the TFR decline for the whole population was greater than for each of its parts. In fact, while the urban TFR fell by only 3% and the rural TFR was practically unchanged between 1968 and 1979, the total population TFR diminished by 6%.
Since the early 1980s the urban-rural population ratio has stabilized, and this structural factor has lost its importance.

*Figure 2*

Total period fertility rate (TFR) and mean age at childbearing (MAC) in Russia, 1959-1999.

The parallel decrease of MAC and TFR suggests that the Russian population adopted a “stopping model” of family formation. This hypothesis is also supported by analysis of trends in marriage in Russia from the beginning of the 1950s to the latter 1990s. (Avdeev and Monnier, 1999/2000).

In the 1968-1980 the continuous decline of mean age at childbearing (MAC), expressing an important shift of fertility to the younger ages, implied a relative stabilization of TFR in the countryside and in the towns.

In keeping with recent investigations into East European fertility (Philipov and Kohler, 1998), I estimated using the Bongaarts-Feeney formula (Bongaarts and Feeney, 1998) the impact of the change in fertility tempo in Russia on the period TFR. Figure 3 shows that in the latter
1960s and in the 1970s the adjusted TFR is lower than the observed one. When the observed period TFR fluctuated at around 2, the adjusted TFR value is about 1.8.

Figure 3

*Observed and adjusted with Bongaarts-Feeney formula TFR in Russia, 1959-1998*

The mean age at childbearing may decrease because of a reduction of the frequency of high order births and/or because they shift to younger ages. Figure 4 shows that up to the beginning of the 1970s the lowering of age at first birth was a principal factor of the MAC decline. Afterwards the situation changed, and from about 1972 age at birth of any order started to fall. And the most important decline is observed for age at fourth or higher order births. In the period 1980-1987 the MAC situation changed paradoxically. The MAC for births of all orders grew at the same time as MAC for births of each order decreased. The inverse situation was observed in the US between 1965 and 1974, when the mean age for births of all orders decreased while mean age at birth of each order rose. (Bongaarts and Feeney, 1998, p.281).
Figure 4

Mean age at birth of different orders (Russia, 1959-1998)

Figure 5 shows that this upturn of the overall MAC trend in Russia was due to an increase in the relative quantum of births of second (from 34% to 38%) and third (from 8% to 12%) orders.

Figure 5

Change in structure of TFR by order of births, (Russia, 1959-1997)
As well as the fertility shift to younger ages, the low fertility in Russia was characterized by an almost complete disappearance of high order births and very low childlessness (Figure 6). So “the average low fertility” in Russia expressed very homogeneous reproductive behavior of Russian families. It is possible to say that since the early 1960s the motto of Russian women with regard to fertility was “Everybody, Early, Few and Quickly.”

**Figure 6**

*TFR composed by total parity fertility rates, Russia 1959-1998*

In contrast with the general homogeneousness of “one-or-two child” reproductive behavior, a few couples continued to have large families of more than three children. (Avdeev and Monnier, 1994/1995; Barkalov and Darsky, 1994; Andreev and Barlalov, 1999). Figure 7 illustrates this paradox of Russian fertility. The fact that the probabilities of fourth or higher order births rise gradually, while the probability of third birth remains very low, proves that in Russia third births are less a deviation from the two-child model than a stage in the formation of the “large family”. So in the Russian model of fertility there is a strong quantitative relation between third and higher-order births, but an insurmountable barrier between two opposite models of reproductive behavior separates second and third births.
In 1981-1987 the introduction of a new family policy produced an important rise in fertility as well as in the mean age at childbearing, but the general model of Russian fertility has remained unchanged. The effects of the policy are very complex. It influenced the quantum of fertility among the under-30s, as well as the fertility tempo of these cohorts. The main result of this policy has been a strong compression of the fertility timing of women born between 1954 and 1965.

**Figure 7**


Figure 8 shows a significant growth of the cumulative fertility at ages 25 and 30 in these cohorts. The growth at age 35 in cohorts 1954-1960 is very weak and cumulative fertility at age 40 has remained unchanged. So the new family policy only helped Russian families to accomplish their reproductive plans sooner but it did not turn them away from the two-child family model.
In the latter 1980s the Soviet economy definitively entered a deep depression, the real value of the fertility stimulating measures was reduced, and fertility began to decline anew.

**Family policy in Russia and its incidence on fertility**

Soviet history provides a good example of how social policy may influence fertility. There are numerous studies on Soviet family and population policy in which scholars sometimes draw quite different conclusions (David and McIntyre, 1981; Chambre, 1954; Glass and Stolee, 1987). Therefore a concise description of the evolution of family policy in Russia is included in this communication.

Immediately after the October revolution the Soviet State instituted a variety of new laws aimed at altering the structure and function of the family. In the first period (1917-early 1930) no demographic goals were declared. Some measures could be considered even as antifamily action. In 1917, ten days after the Bolshevik seizure of power, a bill authorizing divorce was published, and this law was implemented on the last day of 1917. In 1920 the Soviet government liberalized induced abortion. Later, by the Family Code of 1927 unregistered marriage (cohabitation) was recognized as having the same juridical consequences for man, woman and child as the legal
registered one. Now, such measures on the family are discussed or implemented in many west European countries, but in Soviet history they have frequently been interpreted as the Soviet government’s intention to destroy the family (Glass and Stolee, 1987, p.893).

This first liberal period in the history of family policy in Russia ended in 1936 when the State’s attitude towards the family and fertility cardinally changed. In 1936 the Soviet state introduced a strong pronatalist policy. Induced abortion was prohibited and the official procedure for divorce became so difficult that it may by considered as divorce proscription. In addition to these dissuasive measures, the State developed a huge program to improve mother and child health care and introduced substantial annual allowances for women having 7 and more children.

These measures were reinforced during the Second World War by the Decree of 8 June 1944 that introduced progressive birth premiums and monthly allowances for births of third and higher orders, extended maternity leave from 63 to 77 days (35 days before and 42 days after delivery) and instituted special awards for mothers of large families, namely the “Medal of Maternity” for mothers of 4 or 5 children, the “Order of Mother’s Gloria” for mothers of 7-9 children and the honorary title “Mother-Heroine” for those having 10 and more children. By the same Decree unregistered marriages (cohabitations) were deprived of all juridical protection. As a supplementary dissuasive measure, the Decree of 21 November 1941 imposed a tax on childless men aged 20-50 and childless women aged 20-45, ever married as well as single. The Soviet family policy at this period had obvious demographic goals to stimulate population growth. Low fertility and small family were at that time considered as deviant behavior, and all measures were concentrated on supporting the large family and encouraging higher order births, although these had practically disappeared in Russia in the 1950s. Actually only one type of family was absolutely excluded from direct economic assistance, namely the one-or-two child family. The fertility decline and nationwide diffusion of the two-child family during the 1950s obviously reveal a total failure of the demographic policies that dominated up to the 1980s.
It would, however, be incorrect to reduce the family policy of the Soviet State to the direct pronatalist measures. The main support for the Soviet families came from the broad policy of social protection that had no specifically demographic aims. This policy guaranteed to all families free primary, secondary and higher education, free medical care, full employment and accommodation, with only the latter depending on family size. It is very interesting that, despite its policy in support of the large family, the State planned the construction of new blocks of flats with one, two or three rooms, thus designed for the one-or-two-child family. This facet of social policy reflects how the state, in the USSR and other European Socialist countries, became a ‘generalized father’ to children, in the words of Ilona Ostner (1993, p.107). Really the state almost completely took from the individual the responsibility of family building. That was a main cause of the early marriage, young age at childbearing, high compression of fertility timing and homogeneousness of reproductive behavior in Russia as well in most of the European Socialist countries. Whereas in the West European countries education and professional training were completed, a stable job and accommodation were acquired before the stage of marriage and childbearing, in Russia it was the opposite.

After the disappearance of Stalin, family policy was gradually liberalized. Induced abortion was authorized again in 1955 and in the early 1960s the conditions of divorce were simplified.

Moreover, in 1974 a special allowance was introduced for families with children aged less than 12, if their monthly income was less than 50 rubles per person, independent of the number of children. This intervention substantially supported the families in the countryside where monetary income was very low, and the families made up of high school students living off grants which were about 35 or 50 rubles at that time. But it was the beginning of a great break from the old tradition of support for the large family. Henceforth, it was “the young family” that the State was primarily concerned with.
A totally new conception of family policy was materialized in 1981. The birth premiums, child allowances, one-year paid leave for women after childbirth and the possibility of a zero-interest loan were introduced for families with one, two or three children under the single condition that one of spouses was less than 30 years old. These were privileges never before given in the URSS. No wonder that this law produced a little “baby-boom” in the two-child world of Russian society in the 1980s. The new family policy had no affect on the social value of the two-child family.

It has already been mentioned that the timing of Russian fertility was extremely compressed before the introduction of the new family policy. So the reserves of potential fertility growth at very young ages was practically exhausted and it was in the age group 20-29 that the increase of period fertility was observed. In the latter 1980s, what future scenario could be imagined for the early 1990s? The first one was that fertility was really increasing and that the period fertility indicators would stabilize at the level observed in 1983-1987. The second scenario was that there was no cohort fertility quantum increase and the period fertility indicators would decrease for 5-10 years because the fertility reserves were exhausted in the cohorts in the full reproductive ages. If the second scenario were true, in the mid-1990s period fertility would recover its level of the 1970s. Finally, a third scenario was like the second one but with a supplementary hypothesis about the possible aging of cohort fertility. In this case, the decrease of period fertility indicators would last longer than in the second scenario, maybe until the end of the 1990s. These three scenarios were what the Russian demographers were expecting at the beginning of the 1990s, and how they explained the fertility decline that had started in 1988.

It seems that the reality does not entirely fit any of these scenarios and at the same time each of them contains a part of reality.
The “Catastrophe” of the 1990s

Figure 9 displays the age-specific fertility curves for four periods: 1978 – just before the introduction of the new family policy; 1983 and 1987, when Russian fertility was at its highest level since the early 1960s; 1991 and 1995, in the first stage of the fertility decline; and 1999, the year of the sharpest fall ever observed in Russia. The red line connects the period indicators for 1987 and 1991 produced by the same birth cohort. The curves show that until the early 1990s the fertility decline was mostly compensation of previous growth. Actually, between 1987 and 1994 not only TFR but also MAC decreased, signifying a low participation of older birth cohorts in the period fertility and a substantial decrease of second and third order births. (See Figure 2, Figure 4 and Figure 6). But this “compensation period” ended in 1990 when the first-birth TFR started to decline and TFR of orders two and three relatively stabilized.

Figure 9

Since 1995 MAC has grown, in contrast with the continuous decline of TFR. This situation might appear to conform to the fertility-aging scenario, but a detailed analysis shows that this is not the case. Although MAC of each birth order increases, an important decline of age specific fertility is observed at all ages higher than 20. The modal age of fertility has moved from 21-22 years (as it was for three decades) to 19-20 and the shape of age-specific fertility in 1995 seems even younger than it was in 1978. So, since the mid-1990s the fertility decline in Russia should not be attributed to the compensation of 1981-1987 growth, or to fertility aging, but apparently expressed a real fertility decline.

In 1999 the age-period-specific fertility rates for all birth orders combined keep about the same structure as in the 1980s with the modal age at 21.

Even if the mean age decreases because of the more important fertility decline in the middle reproductive ages, one cannot say that fertility shifts to the older ages. The observed changes in age specific fertility rates for first, second and third births strongly support the hypothesis that the social and economic transformations begun in 1992 have led to a real fertility decline. (Figure 10 displays the age-specific fertility rate surfaces for first, second and third births from two angles.)
Figure 10
Age-period-specific fertility rates for first, second and third births, Russia, 1978-1998

Figure 10A.
Figure 10B.

Second birth (right side view)

Second birth (left side view)
Figure 10C.

Third birth (right side view).

Third birth (left side view).
Changes in regional and social fertility differentials: diffusion or adaptation.

In their analysis, Zakharov and Ivanova explain the regional fertility differentials in Russia in 1959-1994 by an “adaptation model” of fertility transition. They argue that during the periods of slow evolution or relative stability of fertility the regional differences’ “descent to a certain limit appears as the leading vector of change in the periods of relative stability.” In contrast, during periods of “quick change … regional differences grow significantly again.” (1996, p.354) This explanation might be questionable even for the long-term demographic transition (Guinnane, Okun and Trussel, 1994); and it is hardly coherent with fertility decline in Russia during the last decade.

The analysis of regional differentiation of TFR in 1999 in comparison with 1989 shows that Russian fertility demonstrates rather an innovation than an adaptation model of fertility change. In fact, TFR decreased everywhere, on average by 41%. The strongest decline was recorded in the region of Khabarovsk (Russian Extreme-Orient) where TFR decreased from 2.093 in 1989 to 1.03 in 1999, a 51% reduction. The smallest decline was recorded in Caucasus, in the Ingoush Republic, where vital statistics for the last decade are very uncertain. If this region is excluded from the analysis, the minimum moves to Kamchatka where TFR declined by 30%.

Although fertility decreased considerably in Russia between 1989 and 1999, its territorial structure has remained practically unchanged. Thus, in 1999 most regions have kept the same position relative to the national level of TFR that they had in the early stage of the fertility decline. Figure 11 displays the relative change in regional TFRs in 1999 in comparison with 1989. The left graph presents observed TFR levels and the right graph shows standardized values.

The social differentiation of fertility in Russia has been insufficiently explored. But some results of a study on births recorded in 1993 indicate that the degree of fertility decline was similar across all social strata (Andreev, Bondarskaya and Kharkova, 1998).
The cohort dimension: questionable postponement and uncertain recuperation.

The analysis of cohort fertility shows us that the recent fertility decline is not simply a matter of delayed childbearing, but more probably expresses the transition from the two-child to the one-child family. And this transition might be the above-mentioned fourth scenario of fertility evolution, which escaped the attention of demographers in the 1990s.

Figure 12 presents the age-specific fertility rates of cohorts of women who had mostly achieved their fertility intentions before the Family policy was implemented in the 1980s (women born in 1948), those involved in the “baby-boom” of the 1980s (women born in 1955, 1960, 1965) and the young cohorts who are the main actors in the Russian fertility scene of the 1990s. Up to now, cohort fertility has decreased essentially at ages 20-25, and has held its ground above this age. It is interesting and important that the fertility peak has not shifted to higher ages and has remained at about age 20 in the 1975 and 1970 birth cohorts. It has even
moved slightly younger in comparison with older cohorts. This change in the shape of age-specific cohort fertility signifies a substantial postponement of first births in the cohorts.

Figure 12

**Age-specific fertility rates of the selected female birth cohorts**

![Graph showing age-specific fertility rates for selected female birth cohorts](image)

However unpredictable the shape of age-specific cohort fertility may be, in contrast with period fertility, it is hard to imagine a recovery sufficient to bring completed cohort fertility to the previous level 1.8.

**Conclusion**

The Russian two-child family system had appeared to be very resistant, whatever the conditions created by the successive changes in Soviet family policy. But the deep social and economic transformations launched since the beginning of the 1990s have probably instigated the transition to a one-child family model. Our present experience and state of knowledge does not allow us to predict the future course of Russian fertility. That calls for investigations especially into the social and psychological aspects of low-fertility reproductive behavior. Nowadays, the optimists can expect the return to the two-child family system just as much as the
pessimists can wait for the definitive adoption of the one-child family. Only one thing is more or less obvious. The fertility trends observed in 1990s Russia cannot be reduced to a temporary reaction or adaptation of the two-child system to a “new social environment”.

Bibliography

Methodology

Data and Analyzes
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Studies on similar situations


