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**Postponement and Recuperation in Russia's Cohort Fertility:
Does the Pronatalist Policy Contributes to the Acceleration or Deceleration of the
Postponement Transition?**

Abstract

The author discusses the methodological problems of the analysis of fertility and evaluation of effects of pronatalist family policy in Russia. The author analyzes the changes in Russia's fertility for the last decades on the basis of a comprehensive set of indicators, which can be obtained on the basis of national statistics (data of vital statistics and population censuses). The central methodological issue discussed in the paper is the interpretation of changes in the level of fertility based on the dual approach to the measurement of the intensity of the demographic processes: on the basis of a system of period indicators (the time scale for the exposure risk of the events is calendar years), and on the basis of a system of cohort indicators (time scale for the exposure - the period from the date of entering the reproductive age for birth cohorts of women). The author uses the well-known concept of "postponement transition" elaborated recently by demographers and demonstrates the example of Russian data, the extent to which the interpretation of changes in fertility in last decades may be different while using period and cohort approaches to demographic analysis. Based on the results of a balanced analysis of various indicators, the author discusses the long-term changes in quantum and timing effects in fertility and formulate its findings on the possible demographic impact of pro-natalist policy on period and cohort indicators of fertility in Russia.

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**Postponement and Recuperation in Russia's Cohort Fertility:
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The specifics of the childbearing postponement and recuperation process in Russia are discussed in this paper. It started with the mid 1960s birth cohorts apparently triggered by the societal, economic and political conditions of the late 1980s and early 1990s at the time when the effects of previous governmental pro-natalist activities in the 1980s were wearing off. The postponement process was proceeding at an even pace during the 1990s and was still in progress among the female birth cohorts of the 1980s.

When fertility was persistently close to replacement in the 1970s, the Soviet government hoped to remedy this perceived major societal issue by implementing a corpus of pro-natalist policy measures in the early 1980s. Although initially embraced by the population, all that these measures accomplished was to advance childbearing and raise the period fertility rates between 1981 and 1987. But the quantum of fertility remained unchanged among the 1950s birth cohorts, namely the cohorts that were in their prime childbearing ages during the 1980s; their total cohort fertility rates were consistently around 1.9 births per woman.

Fertility resumed its decline during the 1990s with the TPF_R at or below 1.3 births per woman from 1995 to 2006. A serious concern about low fertility led to the implementation of an extensive set of pro-natalist measures in 2007 which generated an apparent increase in fertility. The TPF_R increased from 1.30 in 2006 to 1.75 in 2014.

New policy interventions included:

- A substantial increase in pregnancy, birth, and child benefits progressively graded by child order with the option for regional administrations to authorize additional increases;

- Generously remunerated parental leave (beginning over 2 months prior to birth and continuing until 3 months after birth at 100 per cent of mother's salary; up to 18 months of leave partially remunerated (more than 40% of mother's salary); up to 3 years of unpaid leave);

- 'Maternal capital' granted to mothers of second and higher-order children. This award is not granted in the form of cash and can be spent only for three specific purposes three years after the second child's birth or adoption: the improvement of housing, the education of children, + to the mother's pension. Initially 250,000 rubles in 2007 (~ US\$10,000), this was indexed to inflation and grew to 408,960 rubles in 2013 (~ US\$13,000).

Almost every year since 2007, the government strengthened the pro-natalist policies or gave promise of their efforts. In particular, local governments were stimulated to pay local premiums, to give a piece of land for free for the third child, etc. As a result the share of family support in Russia's GDP has roughly doubled, approaching 1 per cent.

In April 2012, Vladimir Putin, in his last speech as Prime Minister, said: —The state, society, religious institutions, public education, and culture should jointly endeavour to generate a strong, happy family with many children. With this statement, Putin made clear his intention to increase fertility during his term as president.

We find the demographic effect of the introduction of new policy measures, especially of all kinds of monetary assistance to the family. Apparently, the policy has pushed to a faster recuperation of period and cohort fertility. At the same time we can observe the retardation of the increase in age of maternity, and even a reverse trend for women who gave birth to the second and subsequent children. In our opinion this could have unintended consequences, and call into question the long-lasting positive change in the level of fertility.

Data

The analysis is based on Russia's period and cohort fertility data assembled in the Human Fertility Database (HFD) updated with unpublished official data of Rosstat. As of December 2015, period age-specific fertility rates by single years of mother's age were available for the years 1959-2014. Age-specific cohort fertility data that could be used for analysis were available starting with the 1940 birth cohort. The 1965 birth cohort was the last one for which age-specific fertility rates were available for all ages 15-49, however, incomplete data up to the 1990 birth cohort were used in our analysis. We also used our own projected estimates of fertility indicators for cohorts with a truncated, incomplete reproductive biography because of young age (we applied extrapolations only for cohorts that have reached at least 30 years of age).

Methods

Methods applied in the analysis are those presented in Sobotka et al. (2011), Frejka (2011) and others specially developed in order to examine how cohort and period childbearing postponement and recuperation are reflected in total period fertility rate trends in countries with low-fertility settings in recent decades (the well-known concept of "postponement transition").

In addition to the traditional measures, such as total period and cohort fertility rates, age-specific period and cohort fertility rates, and cumulated period and cohort fertility rates, some measures obtained from age and birth order-specific period and cohort fertility tables (multistate tables) are used, namely cumulated age and parity-specific fertility rates, age and parity-specific parity progression ratios, distribution of women by number of children ever born etc.

Some findings.

The period of 1999-2006 can be characterized as a period of compensatory growth of fertility rates (recuperation) for generations born in the 1970s after they reach very low levels in the 1990s when they were at the beginning of their fertility career. At the heart of this growth lay the realization of births delayed during the most difficult years of economic and political transformation of the Russian society. The fundamental socio-economic changes in the Russian society initiated the transformation of the age pattern of fertility: the rejection of early family formation in favor of a later marriage and parenthood (fig. 1, 2).

The last pronatalist initiatives does not bring any positive changes in relation to the birth of the firstborn. There are doubts about the long-term effects of policies in improving the likelihood of second births. At the same time, the policy apparently prompted an increase in the probability of the third and fourth births (fig. 3).

Pronatalist policy caused a reduction in the intervals between births, and in particular the interval between the first and second birth close to historic lows. In recent years, the process of increasing age of motherhood braked sharply and is likely that the mother's age at birth of second and subsequent children started to decline.

There is no doubt that the pronatalist policy accelerates the appearance of a second child in the family and has fueled a third and subsequent children in certain social strata.

To what extent raising total fertility will be long-lasting, it is too early to judge. At the same time it must be noted that fertility in Russia is likely to overcome the historic low point,

and much closer today to the level characteristic of the late 1970s (fig. 4). At the same time, the important question remains, what is the real contribution of pronatalist policy in the recovery of the Russian fertility.

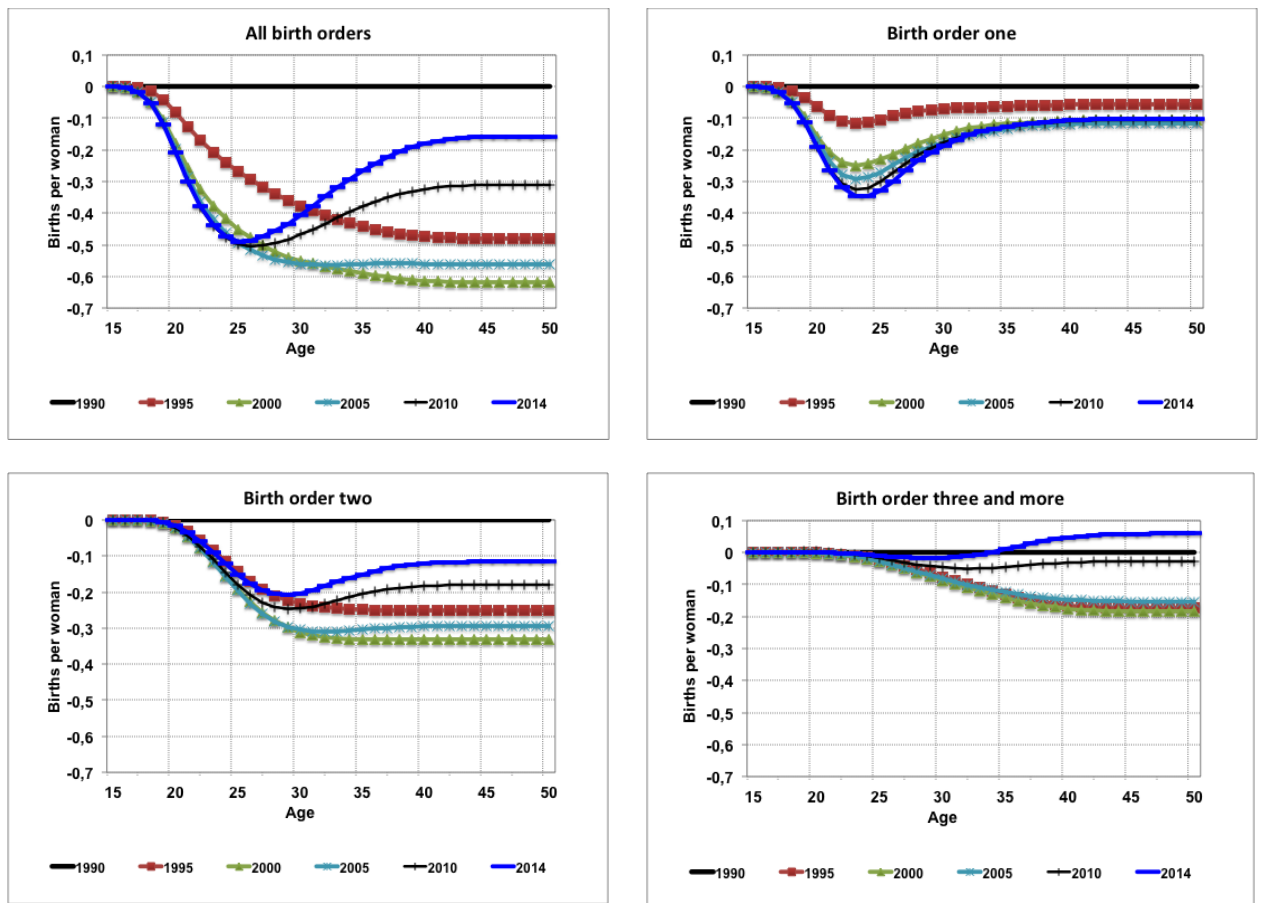


Figure 1 - Differences in cumulated age-specific period fertility rates between base (1990) and subsequent years 1995, 2000, 2005, 2010 and 2014, Russia, by biological birth orders.

Note: Fertility rates here are products of age and parity-specific period fertility tables (multistate tables)

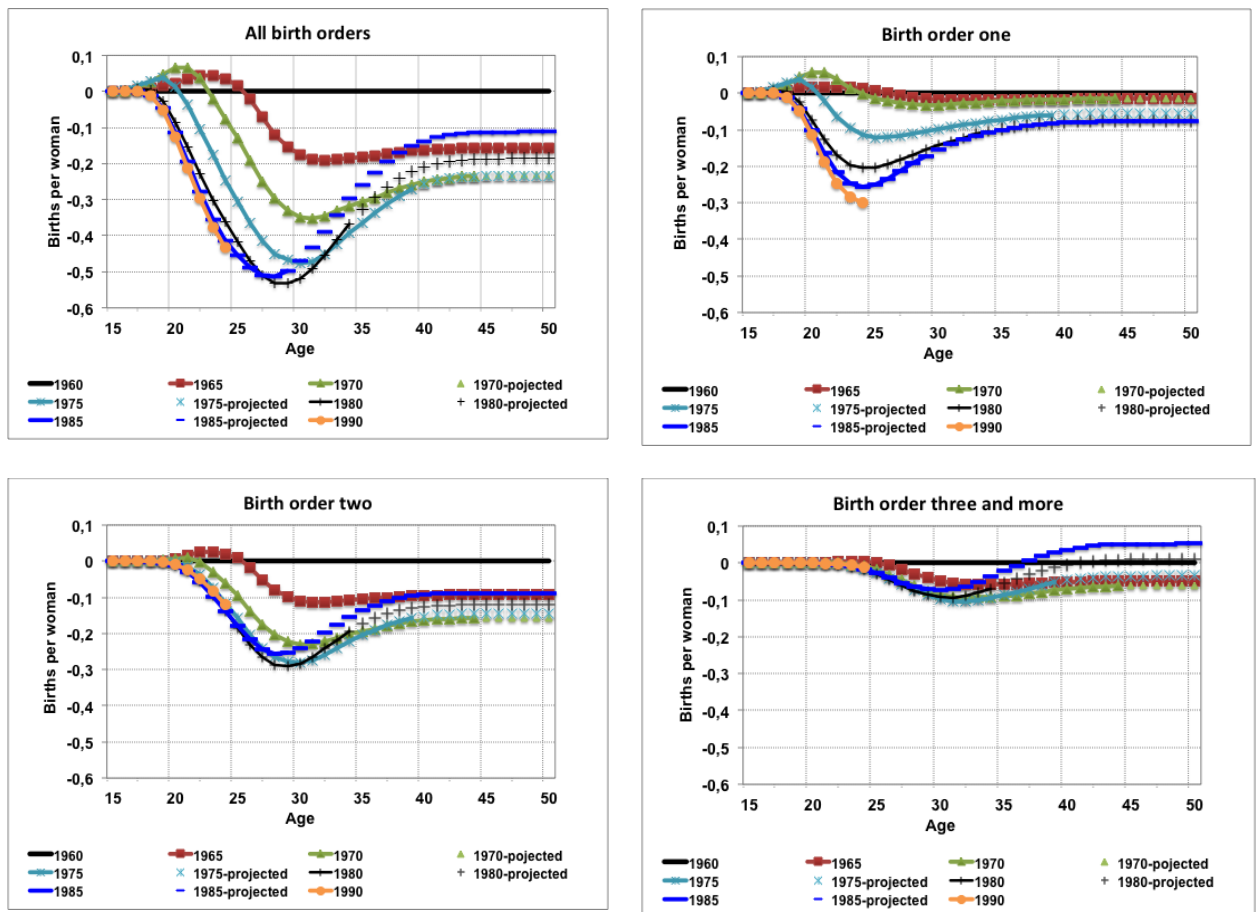


Figure 2 - Differences in cumulated age-specific cohort fertility rates between base (1960) and subsequent cohorts 1965, 1970, 1975, 1980, 1985 and 1990, Russia, by biological birth orders.

Note: Fertility rates here are products of age and parity-specific cohort fertility tables (multistate tables).

The extrapolations for 1970, 1975, 1980 and 1985 cohorts based on spline functions of 4-6 orders for the average rates of change of period $Q_i(x)$, observed in the years 2012-20014. $R^2 > 95\%$ for first births and $R^2 > 99\%$ for the second and subsequent births.

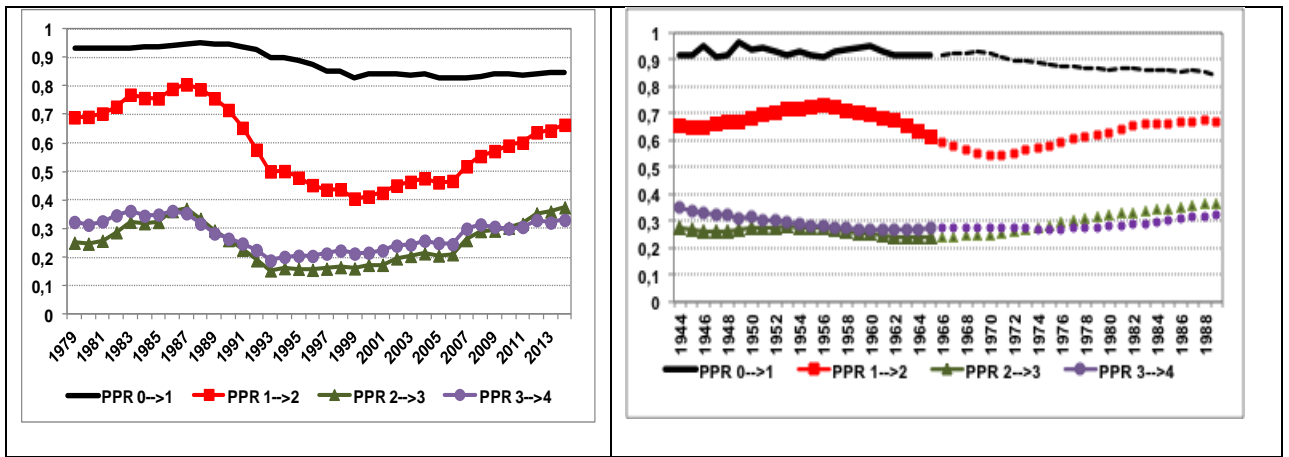


Figure 3 – Period and Cohort Parity Progression Ratios by age 50: Russia, period 1979-2014 (left panel), female birth cohorts 1944-1989 (projections for cohorts born in 1966 and later, right panel).

Note: PPRs here are products of age and parity-specific period and cohort fertility tables (multistate tables).

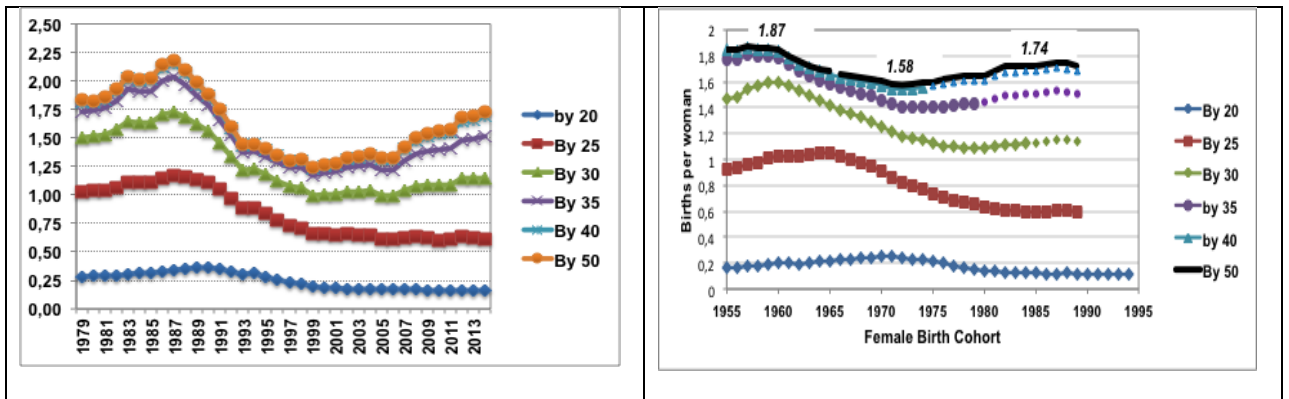


Figure 4 – Period and Cohort Cumulated Fertility Rates by age of 20, 25, 30, 35, 40 and 50: Russia, period 1979-2014 (left panel), female birth cohorts 1955-1994 (projections for cohorts born in 1966-1989, right panel).

Note: Fertility rates here are products of age and parity-specific period and cohort fertility tables (multistate tables).