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First Birth in Russia: Everyone does It – Young

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Abstract

Until the early 1990s, the common characteristics of Russian fertility were early and almost universal marriage and childbearing. In this article I examine the impact of cohort on first birth. I follow Russian women (based on self-reported ethnicity) born between 1930 and 1986 by applying event history techniques to the Russian Generation and Gender Survey (GSS). The results show that first birth took place earlier in women's lives cohorts born from the 1930s to the 1960s cohort. Among younger women, the trend is opposite, but it is too early to speak of a strong postponement effect. Differences in first-birth risk between cohorts are due to differences in marriage and cohabitation patterns.

Keywords: first child, fertility, Russia, event history analysis

Introduction

First birth marks transition into parenthood. This transition has a profound and long-term influence on a woman's life (Sobotka 2004, 39). As is typical in countries east of the so-called Hajnal line (Hajnal 1965), Russian women have historically taken the step into motherhood early and universally (Therborn 2004, 142). Mean age at first birth declined up until the 1990s at the same time as fertility fell. This pattern contrasts with developments in Western Europe, where mean age at first birth increased simultaneously with a decline in fertility (Ruokolainen and Notkola 2007, 89).

The aim of this paper is to examine the timing of first birth and its determinants in European Russia. I am mainly interested in the role of cohorts in entering into motherhood. I also intend to bring further understanding into the dynamics of the unusual fertility development observed in Russia.

Changes in cohort fertility can be seen as a reaction to fundamental transformations in the political, economic, and social structures of society. Cohort fertility does not fluctuate as easily as period fertility, and, thus, is more useful when studying deeper and more stable changes in fertility (Billari 2005a, 74). The weakness of cohort fertility analysis is that it does not reflect recent changes as well as period fertility, because women have not yet reached the end of their reproductive years (Sobotka 2004, 41). This weakness, however, has a greater impact on cohort total fertility than on the time of entering into motherhood.

Current fertility research on Russia has focused on the period change – how the collapse of the Soviet Union and the ensuing economic and societal changes affected fertility. There is room and need for cohort fertility studies on Russia. This study follows birth cohorts born in 1930–1986 and applying the event-history models. Individual data on Russian fertility is scarce and has been available only for a short period of time. The first available dataset is the 1994 micro-census. The second one, covering the whole country, is the Russian Gender and Generation Survey (GGS) conducted in 2006. The present study takes advantage of the Russian GGS.

The structure of the paper is as follows. At first I describe fertility trends in Russia and review earlier studies. To follow, I present the hypothesis. After describing data and methods, I present results, followed by a discussion.

Fertility trends in Russia

When the demographic transition began in Russia at the beginning of the 20th century, mortality and fertility began to decline almost simultaneously. By 1966, the total fertility rate (TFR) had declined from over 7 in 1900 to below replacement level (which is considered to be TFR 2.1). Frejka and Ross (2001, 218) show that Russia was among the first countries where period fertility declined below replacement level. Generally, in 1960, period fertility was lower in Eastern than in Western Europe.

When looking at the development of cohort fertility, we observe a rapid decline between cohorts born in 1870 and 1920. Completed fertility shrinks from 7.2 to 2.3 children, respectively. Thereafter, cohort fertility declines further, but less abruptly until the cohort born in 1960. Figure 1 shows cohort fertility in Russia until 1970. The first cohort with a below-replacement fertility level was born in 1931 (Visnevskij 2006, 157; Ivanov, Visnevskij, Zakharov 2006, 408). The mean age at first child birth declined simultaneously with the number of children. Women born in 1930–1934 had their first child at age 24.8, while women born 40 years later in 1970–1974 had their first child at age 22.0 (Visnevskij 2006,189; Philipov and Jasiolione 2007, Attachment 13). The earlier timing of childbearing occurred in birth cohorts from 1930 to the early 1960s; in these cohorts, the majority of children were born before the women reached their late 20s (Frejka and Sardon 2004, 195).

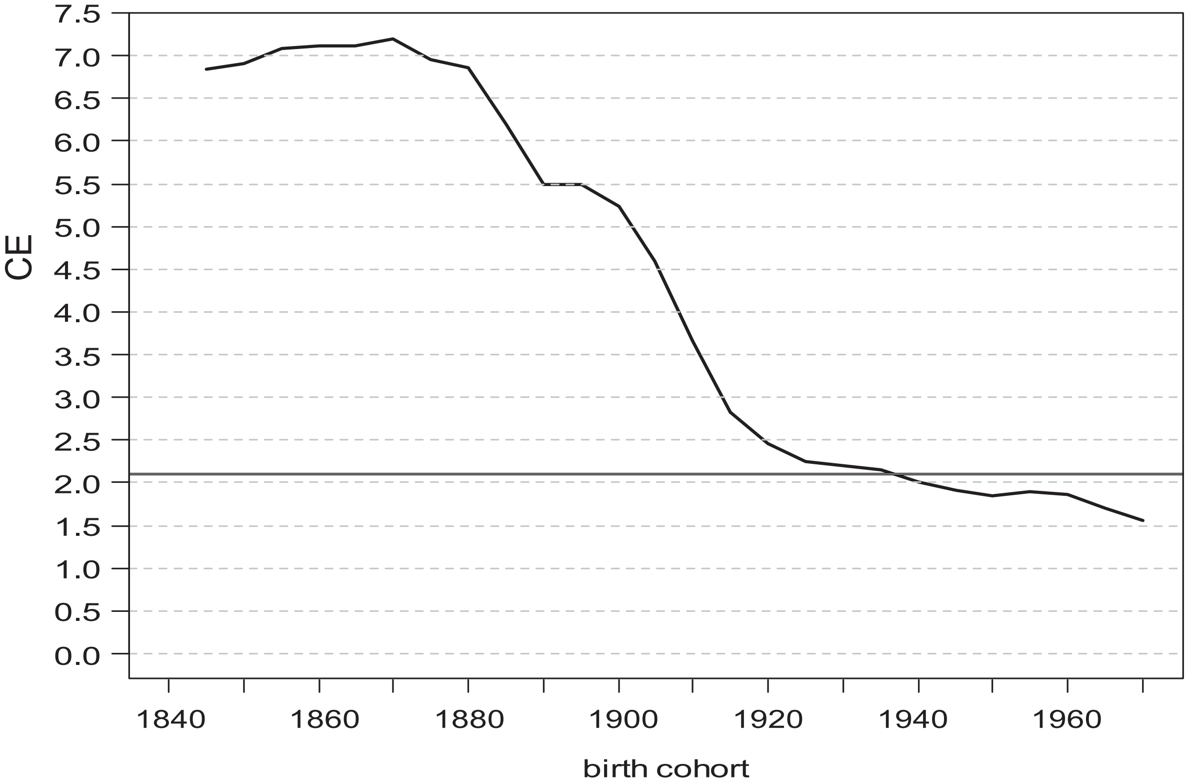


Figure 1: Cohort total fertility in Russia
Five-year averages, estimation for cohorts 1961–1970
Source: Visnevskij (2006)

Table 1: Mean age at first birth in selected cohorts

Cohort	**Mean age at first birth**
1890–1894	24.3[1]
1900–1904	23.4[1]
1930–1934	24.8[1]
1940–1944	24.5[2]
1950–1954	23.6[2]
1958–1959	22.9[1]
1960–1964	22.8[2]
1970–1974	22.0[2]

Source: [1] Visnevskij (2006) and [2] Philipov and Jasiolione (2007, Attachment 13)

The TFR did not, however, decline smoothly to these low levels. During the first half of the 20th century Russia underwent rapid and forced modernization, when peasants settled in cities and women entered paid work. Fertility was not influenced only by modernization; many catastrophes such as world wars, civil war and the associated famine, and collectivization, together with the 1932–33 famine, contributed to the development. Fertility decline was also influenced by abortion and infant mortality rates. The latter declined rapidly as a consequence of the development of health-care services, vaccinations, and better sanitation in towns (Avdeev and Monnier 1995, 3–6; Ivanov et al. 2006, 407–8). Induced abortion was legal in 1920–1936 and was re-legalized in 1955. Termination of pregnancy was widely used as a contraceptive method until the late 1980s, because modern methods were in short supply and sex education was lacking in schools. Soviet medical doctors often warned against terminating the first pregnancy and advised women to carry the child to term (Sobotka 2004, 192; Rotkirch 2000, 144 and 225–226).

Looking at fertility development in Russia after the Second World War, one can observe that both fertility and the mean age at first birth declined simultaneously. After the Second World War, fertility declined steadily until the 1980s. The TFR was 2.89 in 1946–1950, but only 1.93 three decades later. By the end of the 1950s, Russia had turned into a low-fertility country and the two-child model had become common (Avdeev 2001, 4). During the 1980s, period fertility increased and in 1987, the TFR was 2.23. Thereafter period fertility began to decline very rapidly, reaching a low of 1.19 by 1999 (Visnevskij 2006, 157; Nacelenia… 2006, 242).

The fertility increase in the 1980s was largely due to a tempo effect: many women had children earlier when government introduced new family benefits (Ivanov et al. 2006, 411). The mean age at first birth was 25.7 in 1980, but by 1995 it had fallen to 24.8, to turn upwards again and reach 26.4 in 2004. The changes in age at entering into motherhood were smaller: the mean age declined from 23.0 to 22.7 in 1980–1995, and increased further to 24.0 in 2004 (Nacelenia… 2006, 250). Sobotka (2004, 53) estimates that in Russia, postponement of fertility started in 1995.

Theoretical considerations

Earlier studies

The reasons for the fertility decline of the 1990s are the most studied subject in recent Russian fertility research. The reasons can be divided into three groups: structural, economic, and cultural. Structural reasons emphasize changes in the timing of fertility in the 1980s, when women began to have children at a younger age (Avdeev and Monnier 1995, 28). Second, studies that focus on the link between economic hardship and fertility in Russia have found evidence that economic status has an impact on the second and higher parities, but not so much on first birth (Bühler 2003, 18).

However, contradictory findings exist as well, indicating that economic background makes no difference in fertility (Kharkova and Andreev 2000, 228). Kharkova and Andreev (2000, 230) summarize that the fertility progress (decline) was accelerated by the early 1990s economic crisis, but was not caused by it. Especially Russian media has linked together the rapid decline of the TFR and the economic hardships of the 1990s. According to the so-called crisis hypothesis, the deep decline in the TFR is due to the economic and political crises that took place after the collapse of the Soviet Union. However, this crisis explanation has not found support in research (DaVanzo and Adamson 1997; Kharkova and Andreev 2000, 230; Kohler and Kohler 2002, 249; Zakharov 1999, 308).

Some studies approach broader social and cultural factors. The relationship between economic situation and fertility is different at macro and micro levels. Kohler and Kohler (2000) found that different-level data gives contradictory results regarding the relationship between economic situation and fertility. The macro level shows a negative association between economic situation and fertility, while micro-level data shows that families with economic difficulties are more likely to have a second child compared with wealthier families. Kohler and Kohler concluded that people in lower economic positions reduce uncertainty by having a second child. Philipov (2002) has emphasized the overall changes in people's everyday life in Russia, claiming that the explanations that focus on economic and/or ideation changes do not take into account the whole picture. The concept of discontinuity (anomie) is the link between these two explanations and has diverse effects on different parities.

The cultural explanation has received less attention than the economic one. The cultural explanations regard the changes in society as fundamental and long-term. Zakharov (1999, 308) states that the same long-term development is taking place in Russia that happened in Western Europe twenty to thirty years ago, i.e., first-birth intensity decreased in younger age groups and then increased in middle and older age groups. Hoem et al. (2007, 5) tested the second demographic transition hypothesis, i.e. that non-marital cohabitation is a competitor of conventional marriage. They found evidence for a second demographic transition: marriage risk has decreased while cohabitation risk has increased, and this trend started at least a decade before the Soviet Union's collapse.

Scherbov and van Vianen (1999, 2001) have studied the timing of marriage and childbearing from a cohort and structural perspective. Their findings support the idea of a stable cohort reproductive behavior and the idea that period measures are affected by shifts in timing of marriage during a crisis. Earlier studies on Russia have shown that changes in the timing of marriage also change the timing of childbearing, and this explains the period variation in age at first birth.

Russian context

As shown above, the timing of first birth occurred earlier at the same time as postponement of childbearing took place in Western Europe. Childbearing is strongly related to other life course choices of individuals, such as partnership formation, education and work (Billari 2005b, 2–3). These choices are related to society's institutional settings and social norms. Sobotka (2004, 35) lists factors contributing to the postponement of fertility in the Western world. They include prolonged education, the difficulties in combining motherhood and employment, employment instability and economic uncertainty, the changed character of intimate relationships, contraception, and changing social norms regarding parenthood.

In Soviet Russia, early marriage and childbearing were encouraged by institutional structures. Married couples were favored in the housing market over single or cohabiting adults. Mothers received long and generous maternity leave and infant care leave, universal and free day care, shorter working hours, and longer holidays (Therborn 2004, 257; Zdravomyslova 1996, 37–38). Childbearing was encouraged also by a tax on childlessness, collected from childless people aged 18 and over, at an average rate of 6% of earnings (Spielauder, Koytcheva, Kostova 2007, 7). The Soviet government further improved maternity and other child benefits in the early 1980s, for example by increasing the birth allowance (Ivanov 2006, 410).

Soviet Russian society was dominated by the gender contract according to which mothers should work outside the home (Zdravomyslova 1996, 37–38). Women participated in working life, were expected to run the household and also be mothers. By the mid 20^{th} century, women's participation in the workforce reached 50%. By the late 1970s, 85% of able-bodied 20–55-year-old women were employed full-time (Lapidus 1978, 161–166). Such a large scale of female labor force participation was possible because of state-supported childcare. Not only state kindergartens, but also grandparents were important childcare help. It was common that children spent longer periods in grandparents' care, for instance during weekends and vacations (Lapidus 1978, 130–132; Rotkirch 2000, 119).

Early childbearing and marriage were also part of Soviet ideology and everyday morality. Postponement of childbearing for social or professional reasons was unusual and considered selfish. Also women themselves considered 25 years to be old for a first-time mother (Rotkirch 2000, 79; Rotkirch and Kesseli, forthcoming).

Hypothesis

I approach transition to motherhood from institutional and cultural perspectives; institutional in the sense that I assume that during the Soviet time institutional structures strongly supported motherhood at young age and thus rendered fertility patterns similar among women born between 1930 and 1969. But not only social benefits and a secure workplace affected childbearing, but also the fact that it was the norm to have children at a young age. The younger cohort (born in 1970–1986) will differ more, and the first signs of postponement of childbearing are already visible.

My hypotheses are as follows: First, based on statistical information, there are only minor differences in the timing of first birth between cohorts. Second, the variation is mainly a result of differences in marriage and cohabitation, even though in Russia childbearing outside marriage is not uncommon. The second hypothesis approximates findings of Scherbov and Van Vianen (1999, 2001). Third, I assume that level of education does not impact first birth, but enrolment in education lowers first-birth risk. The fourth hypothesis is related to childhood living conditions, including number of siblings and place of birth. I expect, based on a positive effect found in earlier studies (Hoem et al. 2001, 30; Kulu 2005, 67), that women with siblings have a higher risk of first birth. Because rural areas in Russia have higher fertility than urban areas (Philipov 2002, 22; Zakharov and Ivanova 1996, 355), I expect that those born in rural areas have a higher first-birth risk.

Data, variables, and methods

The dataset

This study uses data from the first wave of the Russian Generation and Gender Survey (GGS). The Russian GGS is part of the Generations and Gender Programme (GGP), which the Population Activity Unit (PAU) of UNECE launched in 2000. The GGP consists of national GGS surveys and contextual databases. The main aim of the GGP is to provide international comparative data on childbearing, partnership dynamics, home leaving, and retiring. The GGS is both a retrospective and prospective survey; prospective because it is a panel survey intended to have at least three waves, and retrospective in the sense that the first and second waves both collect retrospective information. The comparability of national data is achieved through the survey design, common definitions, a standard questionnaire, and uniform instructions. The standard questionnaire is prepared by the GGP Questionnaire Development Group, and for the first wave, consists of a core questionnaire and four optional sub-modules dealing with nationality and ethnicity, previous partners, intentions of breaking up, and housing. The aim is to have nationally representative samples of men and women between ages 18–79 (Vikat et al. 2006; Klijzing and Corijn 2002, 12–13; standard questionnaire see http://www.unece.org/pau/ggp).

The first wave of the Russian GGS was conducted from June to August 2004 by the Independent Institute for Social Policy (Moscow, Russia). The sampling was made using a multistate probability sampling. In the first step, primary sample units (PSUs) were created using a list of 2,098 areas (raions). These PSUs were allocated into 38 strata based on geographical factors, level of urbanization, and ethnicity. Three of the 38 strata were selected automatically; Moscow city, Moscow oblast, and St. Petersburg city. Using the "probability of proportion size" method, one area (PSU) was selected from each stratum. Within each selected PSU, the population was stratified into urban and rural substrata (second-stage units, SSUs), and the target sample was allocated proportionally to the two substrata. The required number of dwellings was selected systematically from SSUs starting with a random address on the list. The Kish procedure was employed to select one eligible adult from one household. The total sample size was 11,626 and the response rate for the whole GGS was 44.1%. In Moscow and St. Petersburg, the response rate was very low (14.4%), but considerably higher in the remaining regions (57.2%) (Independent … 2004).

My analysis is based on the Russian GGS Standard file and contains cleaned partnership and fertility histories. The data contains full histories of union formation and dissolution as well as childbearing. The study population of this article consists of Russian women (based on self-reported ethnicity) born in 1930–1986. Only women living in non-Muslim republics west of the Ural Mountains are included in the analysis. Moscow and St. Petersburg have been excluded, because of their low response rates. Table 2 shows the excluded cases. The sample contains 3,115 respondents with 2,691 first births.

Table 2: Number of included and excluded cases in the analysis

Number of respondents	**11,261**
Reason for exclusion	
- Men	4,223
- Area	2,905
- Born in 1920s	281
- Unknown childbearing time	12
- Non-ethnic Russian	679
- Incomplete partnership histories	39
- Conception before age 15	5
- Incomplete process time	3
Number of respondents in the analysis	3,115
Number of events	2,691

Source: Russian GGS, author's calculation

The TFR calculated from the Russian GGS follows the trend of the official TFR, being lower up until 1990 and higher thereafter. Since the cohort of 1945, cumulative cohort fertility in the Russian GGS is the same as the official one (Alich 2007, 12). Cumulative cohort fertility calculated from my sample (Appendix 1), which does not cover all of Russia, is lower than what Visnevskij (2006) presents, but the trend is the same.

Dependent variable

The event of interest in my analysis is the birth of the first live-born child. I have backdated the date of childbirth by nine months to reach the time of conception. This allows me to avoid causality problems such as whether a woman married due to pregnancy or whether pregnancy was the result of marriage. In the event history analysis, causality is defined as temporal order of events: only an event that happened before the other can be a cause of the latter (Hoem and Kreyenfeld 2006, 5).

The process time is the age of the mother (months) starting when a woman turns 15 and ending in the last month of the age of 39. The process time has been analyzed in five-year intervals. In my modeling, two different kinds of censoring were needed: (1) *Right censoring* has been used when a woman turns 40 without a conception leading to a live birth, or with no conception at the time of the interview. (2) *Interval censoring* has been applied in order to exclude divorced or widowed women from the population at risk of pregnancy. The number of events among divorced or widowed women was too small for separate analysis (16 events).

Covariates

The main covariate is the *birth cohort*. I grouped the cohort by decade: 1930s, 1940s, 1950s, 1960s, and 1970–86. The last birth cohort needed to be collapsed, because the birth cohort born in 1980–1986 was too small for analysis. Simple statistics of the cohort is presented in Table 3.

Table 3: Simple statistics of the main covariate

	N of women	Exposures, months	First births
1930s	417	46,336	398
1940s	412	44,228	381
1950s	759	74,213	724
1960s	561	50,159	520
1970-86	865	64,880	548
total	**3,014**	**279,816**	**2,571**

Source: Russian GGS, author's calculation (weighted)

The full model includes two time-varying covariates, three time-constant covariates, and the baseline intensity (age of woman). The covariates are included in the model in the same sequence as a woman would face them during her life course. The distribution of occurrences and exposures of covariates is presented in Table 4.

The three time-constant covariates are: birth cohort, type of place of birth, and number of siblings. To control the effect of childhood context, I introduced *type of place of birth* and *number of siblings* into the model. The variable on siblings is dichotomized: has siblings or has none. The type of place of birth is divided into four groups: regional centre, city, urban-type community, and rural area.

Table 4: Distribution of occurrences and exposures over covariates

	Occurrences and exposures distributed over covariates		
Covariate	Occurrences	Exposures	
		months	%
TIME-CONSTANT			
Type of place of birth			
regional centre	508	60,824	21.7
city	642	76,356	27.3
urban type	273	29,499	10.5
Rural	1,123	110,152	39.4
siblings			
no	369	455,630	16.3
yes	2,202	234,186	83.7
TIME-VARYING			
education			
low	497	39,754	14.2
medium	279	16,827	6.0
vocational medium	577	31,083	11.1
high	210	16,066	5.7
currently enrolled	1,008	176,086	62.9
Partnership status			
single	904	234,612	83.8
cohabiting	338	13,472	4.8
married	1,329	31,732	11.3

Source: Russian GGS, author's calculation (weighted)

The two time-varying covariates in the model are education and partnership status. I assume that a woman finishes her education first and then enters cohabitation or marriage. Therefore, education is added before partnership status in the model. *Education* reflects respondents' socio-economic status. Unfortunately, I do not have completed education histories. I used the level of the highest degree obtained and the time of completing the degree, to construct a time-varying covariate for education. I assume that a woman was continuously enrolled until the reported date of graduation. Only the highest level of education is reported, so highly educated women did not report when they reached lower levels of education. Education is grouped into five categories: low, medium, vocational medium-level, high, and currently enrolled. *Partnership status* has been grouped into single, cohabiting, or married. The order of unions (first cohabitation/marriage or subsequent) has not been separated.

Model

At first I analyzed the timing of first childbearing by tabulating the sequence of union and childbearing and using cumulative hazard estimates. The second phase of analysis was to estimate a piecewise procedure in order to investigate how the effect of cohort is influenced by inclusion of further covariates. I constructed the following full model of multiplicative main-effects:

$$h(t) = a_i(t) c_j b_k s_l e_m(t) \, p_n(t)$$

where *h(t)* is first-birth intensity, which depends on the following factors: *a* is the basic time factor (months elapsed since respondent's 15th birthday), *c* represents cohort, *b* the type of place of birth, *s* the number of siblings, *e* education, and *p* partnership status. The subscripts i, j, k, l, m, and n denote the number of categories of each variables. In order to reduce the bias related to the sample procedure, Kish weights have been applied in the analysis. In the last step of the analysis, I estimated the interaction terms for cohort and age, for cohort and education, as well as for cohort and partnership status. The effect of other covariates, when interaction terms are included, was checked. Analyses were made using the STATA 10.0 program and its streg-component.

Results

The timing of first birth

In this chapter I look at the timing of first birth by cohort, examining sequence of union, conception, and birth of first child in women's lives and using the cumulative hazard based on Kaplan Meier estimates. The findings support the hypothesis that cohorts from 1930 to 1960 had their first child at a younger age than previous cohorts.

The timing of first childbearing does not change much across cohorts, but several observations can be made. The first is the earlier occurrence of childbearing among women up until the cohort born in the 1960s. The second concerns the signs of postponement among the youngest cohort compared with the previous cohort. Here we need to keep in mind that Moscow and St. Petersburg are not included in the analysis and that, probably, the postponement behavior started there (Rotkirch & Kesseli forthcoming). At the same time, when first birth took place earlier in women's lives, also union formation followed the same pattern, as can be seen in Appendices 2–4. Union formation has not lost its universality, but younger women cohabit more frequently than previous cohorts. The lower level of marriage among women born in the 1930s and 1940s is a consequence of the shortage of men that followed from wars.

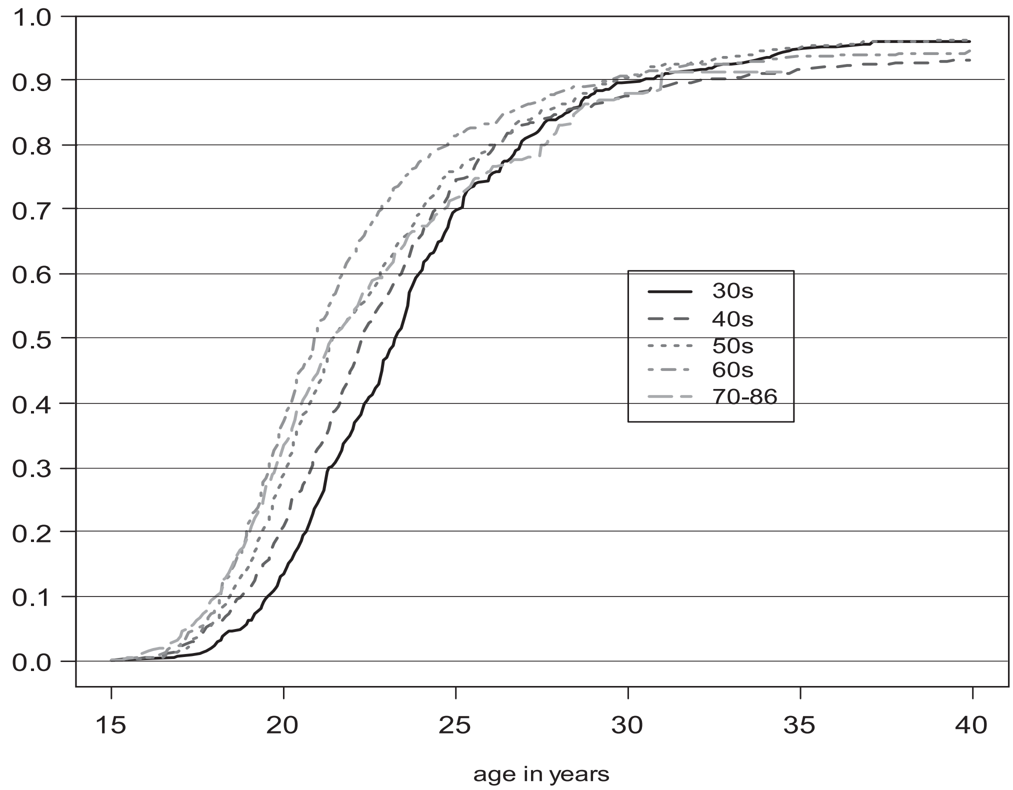


Figure 2. Cumulative hazard for first conception leading to a live birth
Source: Russian GGS, author's calculations

Out-of-wedlock births in Russian increased from 15% in 1990 to 29% in 2003 (Recent demographic… 2004, 72). Single motherhood has not increased over cohorts, on the contrary, it has decreased, as can be seen in Table 5. The increase of out-of-wedlock births is more a consequence of an increase in cohabitation. The share of births as a result of conception before union formation (marriage or cohabitation) increased from 10% to 20%, from cohorts born in the 1930s to those born in the 1950s. At the same time, births conceived within unions have decreased from 75% of all births to 70%. More than 2 out of 3 births are still conceived within unions (marriage or cohabitation), and this supports the hypothesis that changes in the timing of first birth are a result of changes in the timing of union formation, while both remain universal events among Russian women.

Table 5: First birth by union status of the woman (women with children only), %

Cohort (age at survey)	**1930s** (65–74)	**1940s** (55–64)	**1950s** (45–54)	**1960s** (35–44)	**1970–86** (18–34)
Union status					
Single motherhood	13.7	9.7	7.6	8.1	7.6
Conception/union/birth	10.0	11.9	19.9	19.7	20.3
Union/conception/birth	75.3	77.4	69.4	71.2	70.3
Second union/conception	1.0	1.0	3.1	1.0	1.8
N	518	421	684	517	552

Source: Russian GGS, author's calculations

Cohort's role in first birth

Table 6 reports the results from piecewise constant event history models on first birth in Russia. In the first model, only baseline duration (age of woman) and cohort are included. In this model there are differences between cohorts; women born from the 1950s onwards have a higher first-birth risk than women born in the 1930s. This pattern remained the same when I included place of birth, siblings, and education in the models (Models 2 and 3). But the differences between cohorts disappeared when partnership status was included in the model.

Table 6: Relative risk of first birth

Covariate	Model 1	Model 2	Model 3	Model 4
Age				
15–19	1(ref)	1(ref)	1(ref)	1 (ref)
20–24	3.45***	3.49***	2.67***	1.25***
25–29	2.85***	2.93***	2.03***	0.64***
30–34	1.78***	1.83***	1.23	0.31***
35–39	0.75	0.78	0.52**	0.12***
Cohort				
1930s	1(ref)	1(ref)	1(ref)	1 (ref)
1940s	1.05	1.08	1.19*	1.07
1950s	1.21***	1.26***	1.32***	1.13
1960s	1.35***	1.43***	1.46***	1.18
1970–86	1.16*	1.28***	1.35***	0.87
Type of place of birth				
Regional centre		0.79***	0.87*	0.84*
City		0.79***	0.83***	0.80**
Urban type		0.85*	0.88	0.86
Rural		1(ref)	1(ref)	1(ref)
Siblings				
No		0.86**	0.88*	0.89
Yes		1(ref)	1(ref)	1(ref)
Education				
Currently enrolled			0.48***	0.59***
Graduated/completed				
Low			0.91	0.85
Medium			0.95	0.83
Vocational medium-level			1(ref)	1(ref)
High			0.78**	0.72**
Partnership status				
Single				1(ref)
Cohabiting				7.90 ***
Married				11.32***
Log pseudolikehood	-3 091	-3 071	-2 955	-1 899

Source; Russian GGS, author's calculation; *p<0.05, **p<0.01, ***p<0.001

The effect of type of place of birth supports findings in earlier studies, i.e. that fertility is higher in urban areas than in rural areas. First-birth risk for women born in regional centers or cities is lower than for rural-born women. This effect remains in all models. The existence of siblings loses its impact when partnership status is included in the model. According to my expectation, enrolment in education had a negative effect on first-birth risk. In the final model, where also partnership status is included, current students had a 40% lower first-birth risk compared with those with a medium-level vocational degree. Contrary to my expectations, the effect of education level is slightly negative. Women with higher educational attainment had a 28% lower first-birth risk than women with lower education. This effect disappears when interaction between age and cohort or cohort and partnership is included in the model. These interactions had no effect on other covariates.

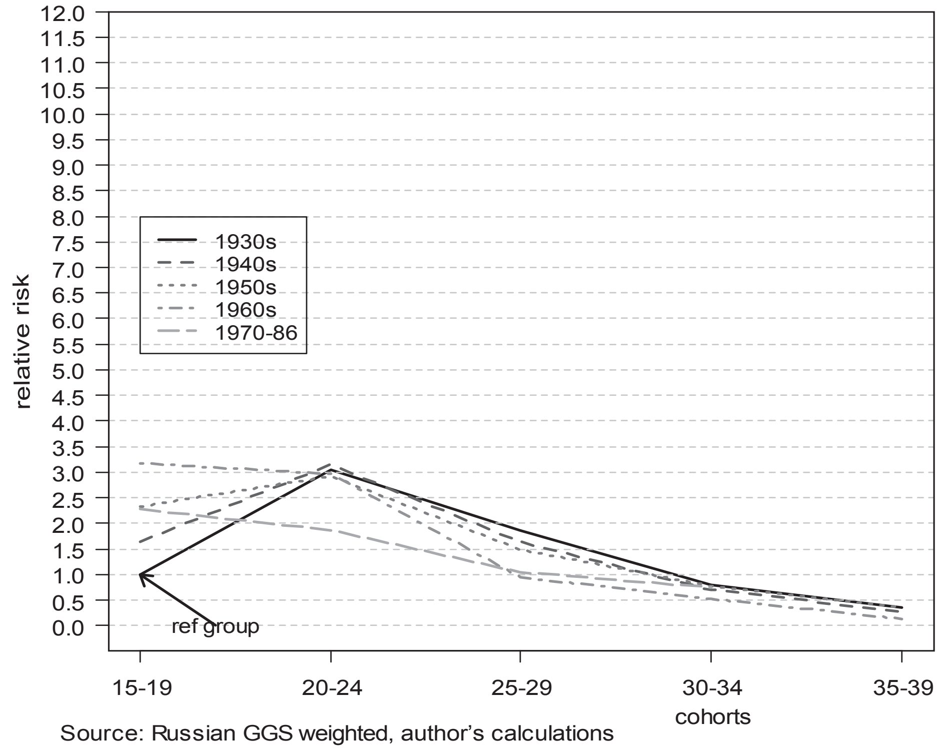
The effect of partnership status was strongly positive. Compared with single women, cohabiting women had an almost eight-fold first-birth risk and married women an 11-fold first-birth risk. All other covariates strengthened the differences between cohorts except partnership status. Interaction between age and cohort did not change this result.

Interaction models

In order to capture the effect of cohort and age/education/partnership status, interaction models were employed. The results reveal that there is no general trend of impact of educational level on first birth across cohorts. The only common and statistically significant feature is that in each cohort, women enrolled in education had a lower first-birth risk than others. (Results not shown in the figures.)

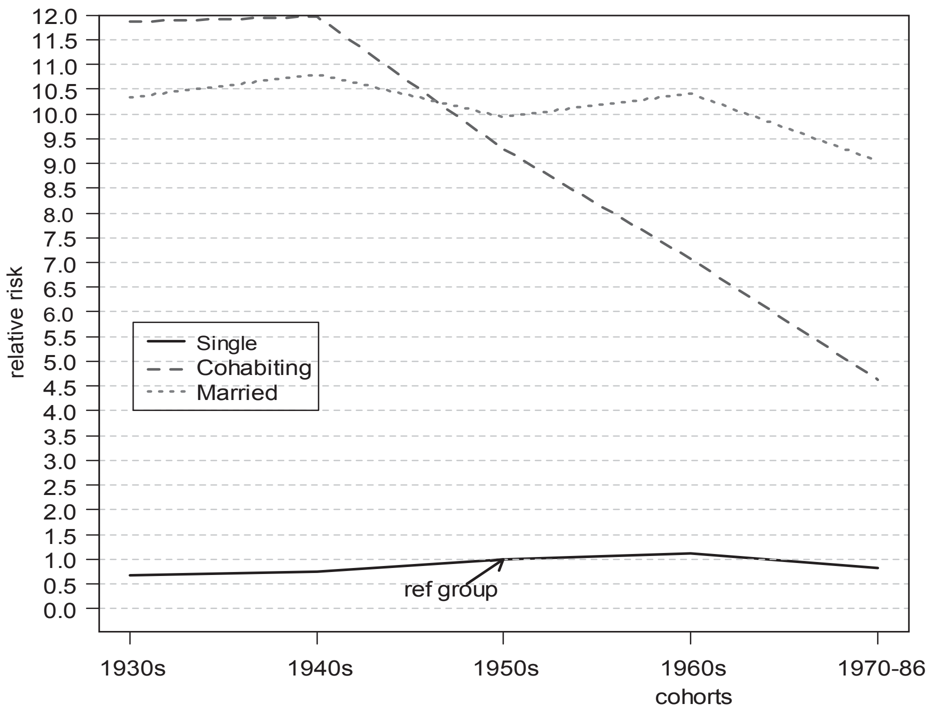
Interaction between age and cohort follows the result of the cumulative hazard, and this interaction is presented in Figure 3. The first-birth pattern is quite similar among different cohorts, but two observations can be made. First, relative risk at age 15–19 increased at each subsequent cohort after the one born in the 1930s. Second, among the youngest cohort, the relative risk of first birth decreased by age, whereas in other cohorts, the highest first-birth risk was in the age group of 20–24 years.

By creating a combination model that includes cohort and partnership status, I expect to obtain a better understanding of how the effect of partnership status has changed over the cohorts. As can be seen in Figure 4, the greatest changes have taken place among cohabiting women. When the risk for cohabitation has increased (Hoem et al. 2007, 5), simultaneously, the risk of first birth has decreased. This result shows that younger women tend to cohabit without childbearing. Cohabitation and marriage increased the risk of first birth in all the cohorts, but less in younger cohorts than in older ones.



Source: Russian GGS weighted, author's calculations
Standardised for type of place of birth, siblings, education and partnership status

Figure 3: Relative risk of first birth by age and cohort



Source: Russian GGS weighted, author's calculations
Standardised for type of place of birth, siblings, education, and partnership status

Figure 4. Relative risk of first birth by cohort and partnership status

Discussion

In Russia, first births have been an almost universal event; only less than 10% of women remain childless, and typically women experience first birth at a relatively young age. From the cohort of the 1930s to the 1960s women had their first child younger than in previous cohorts. Younger cohorts show signs of postponement of first birth. These women are still in the process of possible first births, so the results for them are incomplete.

My analysis relies on survey data and on a sample consisting only women living in Russia at the time of the interview. As in any survey data among older cohorts, only survivors could be interviewed. Also, migration causes some bias to the sample. Among the older cohort, cohort total fertility follows the official trend, so the data used here is reliable enough for analysis. The absence of Moscow and St. Petersburg from the analysis might give too conservative a picture of the latest changes in first-child patterns in Russia.

In non-metropolitan Russia, the norm of having a first child at a relatively young age has not changed yet, as it has in the rest of (Western) Europe. During the Soviet period, when early childbearing was supported, the age at first child remains low and has even decreased. Traditions in Russia also support this pattern, as historically, childbearing and marriage have taken place at an early stage in a woman's life. Signs of new pattern of having one's children at a later age can now be seen.

Factors related to women's childhood conditions (type of place of birth and siblings) show no common trend. Number of siblings has no effect on first birth when other covariates are included in the model. An urban environment, on the other hand, reduces first-birth compared to a rural one. Enrolment in education lowers the first-birth risk significantly, and first-birth risk does not vary between education levels upon completion of education. The latter result occurs when interaction between cohort and age is included in the model.

My main task was to examine the role of cohort in first birth. I found that entering into motherhood is largely influenced by partnership status. Differences in timing of marriage and cohabitation explain differences between cohorts in first-birth risk. This finding is in line with the results of Scherbov and van Vianen (1999, 2001), indicating that the differences between cohorts are a result of the different timing of union formation between cohorts. The role of cohabitation changes over cohorts; for younger women, the start of cohabitation does not automatically mean motherhood. Younger women may cohabit without any intention of childbearing. The relationship between marriage, cohabitation and first birth needs further examination.

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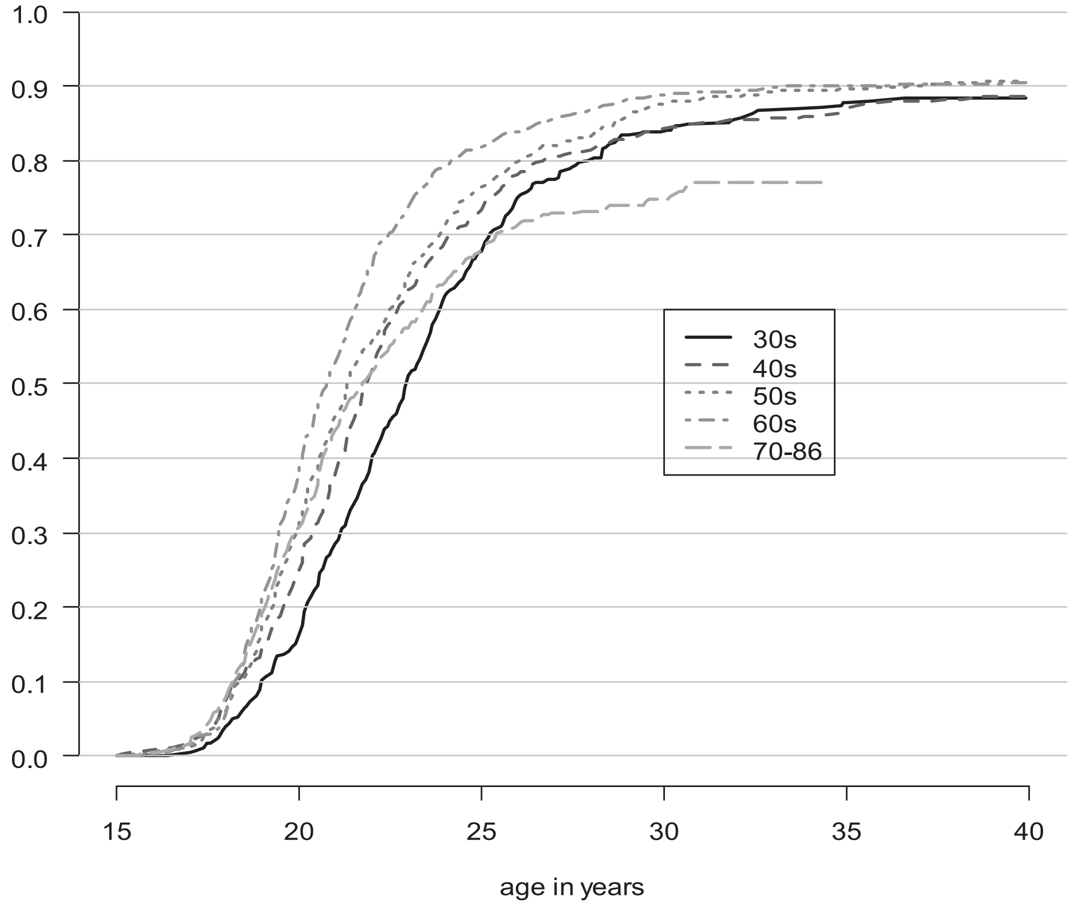
Appendices

1. Mean number of children by cohort and by age

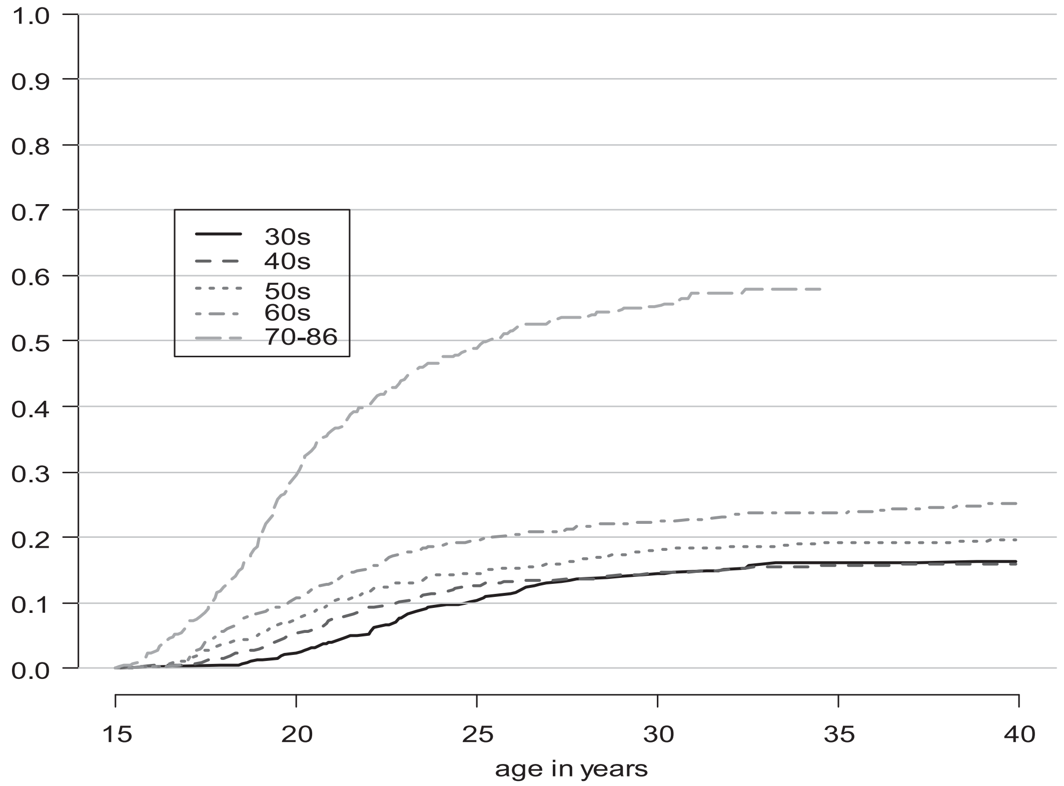
	cohort				
	1930s	**1940s**	**1950s**	**1960s**	**1970s**
15–19	0.08	0.13	0.17	0.23	0.24
20–24	1.02	0.99	1.03	1.11	0.79
25–29	1.40	1.35	1.35	1.42	1.15
30–34	1.68	1.57	1.63	1.56	
35–39	1.79	1.63	1.72		
40–45	1.81	1.65	1.74		

Russian: GGS, authors calculations.

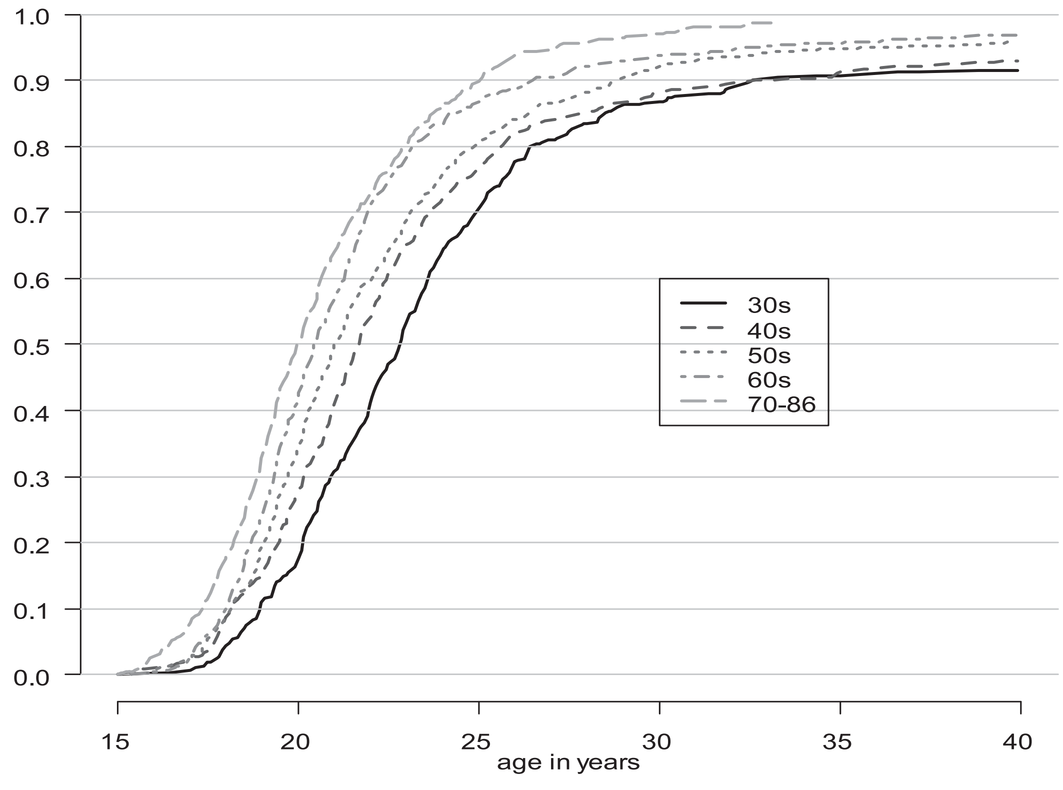


2. First marriage (direct and indirect), cumulative hazard

Source: Russian GGS weighted, author’s calculations



3. First cohabitation, cumulative hazard
Source: Russian GGS weighted, author's calculations



4. First union (cohabitation or direct marriage); cumulative hazard
Source: Russian GGS weighted, author's calculations