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ESTIMATING EFFECTS OF 2007 FAMILY POLICY CHANGES ON PROBABILITY OF SECOND AND SUBSEQUENT BIRTHS IN RUSSIA

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Estimating effects of 2007 family policy changes on probability of second and subsequent births in Russia[4]

From 2007 to 2014 total fertility rate in Russia increased from 1.42 to 1.75. To what extent this growth is related to a package of family policy measures introduced in 2007? Although the maternity (family) capital program is the most well-known innovation of the 2007 reform, we argue that the new rules of monthly childcare allowance assignment is its another major component. Since all measures were introduced simultaneously, it is only possible to estimate their cumulative effect on subsequent fertility behavior. Using panel Russian Generations and Gender Survey data collected in 2004, 2007 and 2011, this study assesses how family policy changes introduced in 2007 were related to the fertility behavior in Russia in recent years. We find a statistically significant increase in the chances of having second and subsequent births in September 2007 to Summer 2011 in comparison with the period of Summer 2004 to September 2007. We interpret that as a cumulative effect of the 2007 policy changes. We acknowledge that the observed effects might be related only to the calendar shifts in fertility behavior and further data and studies are needed to make any conclusions about completed fertility of the cohorts affected by 2007 family policy measures.

JEL Classification: J13

Keywords: Family Policy, Pro-Natalist Policy, Russian Maternity Capital Program, Fertility, Births, Generations and Gender Survey, Russia.

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INTRODUCTION

The question of whether the demographic, family and, wider, social policies can influence fertility occupies the minds of researchers and policy makers for several last decades, but still has no clear answer. From the perspective of economic theory of fertility (Becker 1991), family policy instruments, mainly child benefits and allowances, reduce the costs of having children and thus can contribute to increase in the number of births. Sociology provides several alternative theoretical explanations, including risk aversion explanation / postponement transition, gender-equity concept and welfare regime approach (Balbo et al., 2013; Bradshaw & Attar-Schwartz 2011; Billingsley 2010). Despite of the differences among these sociological explanation, they all focus on how different social institutions structure people's life courses and, hence, affect their fertility decisions (Balbo et al., 2013; McDonald 2000a). However, most of empirical research focuses on micro-level determinants of reproductive behavior and tries to estimate the effect of separate policy measures (e.g., cash allowances, or formal childcare availability, etc.). Although under certain circumstances (e.g. quasi-experimental or comparative data) this strategy can bring interesting results, it still suffers from the inability to catch the potential complementarity of different policy measures realized simultaneously (Thevenon 2011).

In this paper, we attempt to assess overall policy effects on fertility. We consider all policy changes introduced in 2007 together as in our opinion it is impossible to separate effects of maternity capital program from effects of all other family policy novelties launched in the same year. Therefore, we focus on the following research questions: Have the measures of Russian pro-natal policy introduced in 2007 influenced probability of second and consequent births? Do we observe or even should we expect any changes in terms of second and consequent births' probability for those who have fallen under the new policy measures? And finally, what else could have influenced the observed dynamics of fertility?

Generally, pro-natalism was officially inscribed on the Russian political agenda in the mid-2000-s, and since then different aspects of the pro-natalist policy have been often discussed among Russian experts and officials. In 2007, the Russian government introduced a number of family policy changes aimed to support families with children and to promote motherhood. The main goal of the government at that moment was to encourage the birth rate growth, which is why the mentioned policy changes were supposed to stimulate the second and subsequent births. Overall, there are four main novelties of the 2007 family policy reform.

First, a lump-sum birth grant for those who had their child born, adopted or fostered was added to the system of family benefits. In case of the birth of two or more children, this grant is

paid for each child. The amount of the grant was set at 8,000 rubles in 2007 and due to the annual indexation it reached 14,497.8 rubles in 2015.

Second, the maximum size of the monthly allowance paid to working mothers during their maternity leave has been increased almost by 1.5 times, from 16,125 rubles to 23,400 rubles in June 2007. By 2015 due to the annual indexation this upper limit of the allowance amounted to 36,563 rubles per month.

Third, starting from January 2007, a monthly childcare allowance for children under 1.5 years old was extended to non-working women, who received 1,500 rubles per month for the first child and 3,000 rubles for each of the subsequent children. At the same time, rules of the childcare allowance paid during parental leaves also changed for working women. Since 2007, its size equaled to 40% of the woman's average salary calculated for 12 month preceding the childcare leave, but no more than 6,000 rubles. The minimum size of the allowance was also raised up to 1,500 for the first child and 3,000 rubles for each of subsequent children. Before this allowance amounted to 700 rubles for all working women regardless of their salary or of the number of children they had already had.

In whole, in 2007 the introduction of these new rules concerning childcare allowance increased total amount of payments for each woman getting salary over 15,000 rubles approximately by 90,000 rubles for the whole period (by 5,300 rubles monthly during 16-18 months). By 2015, due to the annual indexation the minimum sizes of the childcare allowance reached correspondingly 2,718.3 rubles and 5,436.7 rubles. The rules for setting maximum size of this allowance were once more revised in 2011, and in 2015 the maximum monthly payment reached 19,855.8 rubles[5].

Finally, fourth, and maybe the best-known novelty of 2007 was the introduction of the maternity (family) capital program[6]. This program was adopted for the period of 2007-2016 and aimed at encouraging families to have a second or subsequent child by entitling them to the *maternity (family) certificate*. The maternity certificate was worth 250,000 rubles in 2007, and by 2015 its value went up to 453,026 rubles. Generally, families owning the certificates cannot get this money in cash. Over the past 9 years the opportunity to get lump sum payments from the maternity capital was provided to families only twice, during the economic crises periods, in 2009-2010 (12,000 rubles each year) and in 2015 (20,000 rubles). The rules of the program allow using maternity capital funds as a non-cash payment for one of three purposes, namely, (a) to improve family's housing, and this includes both purchase of new housing via mortgage or directly and improvement of the current housing, (b) to pay for the child's education or (c) to

[5] For a detailed description of the maternity and parental leave regulations and related benefits see (Sinyavskaya, et al., 2015).

[6] Later on in the paper we will be referring to it simply as to *maternal capital program.*

invest in the mother's retirement savings. Besides that, the maternity capital funds can be used no earlier than 3 years after the birth of the child.

Thereby, almost all family policy novelties of 2007 affected families at the moment of birth of the child and were cash transfers, unconditional or conditional ones. Although the research proves the more diverse and complex family policy systems to be the more efficient ones (Thévenon, *et al.*, 2014), a broader goal of supporting families with children at all stages of their existence has not been recognized in Russia, at least until recently. Problems of reconciliation of childbirth and childcare with mother's employment and of early pre-school services availability also came to the official debate on the government level just a couple of years ago. However, until now these issues remain mainly in the field of rhetoric and do not transform into efficient policy actions. Formal childcare is mostly available for children over 3 years old, while coverage of children under 3 was estimated at the level of 17.8% in 2012/2013 according to Transmonee database (Sinyavskaya, *et al.*, 2015).

In 2014, the total fertility rate (TFR) in Russia amounted to 1.75 children per woman. The birth rate has been steadily growing over the past 14 years, yet the most significant increases occurred in 2007, 2008 and 2012. Moreover, in recent years the growth of the number of births was mostly associated with an increase in the number of second and subsequent births (Frejka & Zakharov, 2013). Government officials interpret these processes as an unequivocal indicator of the success of the public policy measures. In addition, usually the entire increase in TFR is being attributed to the maternal capital program efficiency. However, existing studies have not actually proven this point of view clearly yet.

Standardization of age-specific birth rates over the past few years demonstrates that the gain in total fertility rate occurred due to both favorable dynamics of the fertile women population and increase in the intensity of births (Kuchmaeva & Petryakova, 2010). At the same time, the increase in the birth's intensity could be related to an actual fertility growth or to a change in the calendar of births in some generations of women. In 2013, Zakharov in his paper shows that the introduction of the new family policy measures has not led to any increase of fertility intentions and hence suggests that the observed fertility growth happens mostly due to births calendar shifts (Zakharov, 2013). At the same time, estimations based on the structural dynamic programming model, treating maternity capital as a direct and unconditional financial support for families, reveal a positive long-term effect of the 2007 policy changes on fertility (Slonimczyk & Yurko, 2013). The authors of the paper insist that the discovered effect should be ascribed to the maternity capital program.

This paper consists of 6 sections. In the first section we discuss the theoretical framework of the study. In the second section we provide a detailed description of the methods and data

used in the study. In the third section we review the results of the descriptive analysis of the data, while in the fourth and the fifth sections we present the two parts of the regression analysis resuts. Finaly, in the last section we conclude the study and provide space for further discussion on the topic.

1. THEORETICAL FRAMEWORK OF THE RESEARCH

The debate about the extent to which family and demographic policies can influence the reproductive behavior and generate the rise in births in countries with low fertility, has no single answer either in Russia or abroad (McDonald, 2000b; Gauthier, 2007; Neyer & Andersson, 2008; Bongaarts, 2008; Langridge, *et al.*, 2010; Luci-Greulich & Thévenon, 2013; Zakharov, 2013; Slonimczyk & Yurko, 2013). Economic theory, developed by Becker (1991), predicts that the effect of birth-related allowances, which increase household income, on fertility would be most probably positive. The only possibility why the allowances might not lead to higher fertility is that families decide to use this money to increase quality of children (Gauthier, 2007). However, it can hardly be relevant when we talk about benefits closely related to the moment of childbirth. The limitation of the classical economic theory of fertility is that it focuses mainly on the completed fertility. Some models were developed to predict the effect of different policy instruments on the timing of the first births (Cigno & Ermisch, 1989; Walker, 1995). Theoretical predictions of the effect of the allowances on the spacing between births and on the probability of second and subsequent births remain unclear.

In her reviews of the relations between family policy and fertility, Gauthier (2007, 2008) claims that there is plenty of empirical evidence of the positive, although small or uncertain, effect of the child allowances on the timing and spacing of births rather than on the final number of births. Most of the studies focused on the family policy effects on fertility are based on macro-level data or national time-series data. However, Neyer and Andersson (2007) argue that the influence of the policy instruments on fertility should be based on micro-level individual data.

Measures implemented in Russia in 2007 are essentially cash benefits or financial measures, which are based on the assumpt ion that the main factor of low fertility in this country is low incomes. Hence, by increasing household income the government can motivate people to have two or more children. Gauthier (2007) concludes that most of the micro-level studies also confirm positive effect of cash benefits on fertility, yet there is some variation with respect to the parity. From the perspective of our research, the results of the Milligan's study (2002) of the effect of the Allowance for the Newborn Children, existed in the Quebec province of Canada in 1988-1997, are quite important. He found that fertility of families whose childbearing decisions

were made exactly during the existence of this allowance increased by 25%. Cohen and colleagues (Cohen, *et al.*, 2007) also observed substantial (by 7.8%) increase in fertility in Israel induced by the mean level of governmental child subsidies; and the positive effect was particularly high for the lowest 50% of households differentiated by income. Recent research also provides some new positive evidence. For instance, Brewer et al. (2008) estimate almost 15-percentage increase in births among low-income low-educated British women in response to the introduction of Working Families' Tax Credit and the increased level of means-tested Income Support for families with children. Boccuzzo et al. (2008) tested the effect of the bonus at birth introduced in Italy in 2000 and then re-oriented toward families with lower incomes in 2004. They found some significant effects of this bonus on the reproductive decisions of low educated women related to higher-order (second and particularly third) births. Drago et al. (2009) studied the effect of the introduction of Baby Bonus in Australia in 2004 and observed the modest growth of the birth rate in response to this measure. Parr and Guest (2011) also concluded that the effect of the Baby Bonus and Child Care Rebate in Australia are positive but small and much less that the effects of socio-demographic and economic characteristics.

Thus, most of the research finds a positive impact of cash benefits and child allowances on the calendar of births, while the effect of these measures on the completed fertility is still unclear. The variation of the magnitude of the effects and the characteristics of the population responded to these policy measures can be partially explained by the fact that different countries have different goals of family and demographic policies and consequently the target groups, instruments, and the costs of their implementation are also different (Vobecká, Butz & Reyes, 2013). Finally, the variance in the results of empirical research linking policy and reproductive behavior can be attributed to different quality of data used and differences in the methodology applied. This study aims to make a contribution to this debate on basis of Russian case.

2. METHOD AND DATA

The description of the current fertility dynamics in the first part of the research is based on the aggregated data on fertility from the Rosstat database.

The regression analysis discussed in the second part of the paper employs the data of *Parents and children, men and women in a family and society* survey conducted in Russia as a part of the international program *Generations and Gender*. In literature this survey is also often referred to as Russian Generations and Gender Survey or Russian GGS. Three waves of the Russian GGS were conducted by the Independent Institute for Social Policy (IISP) with assistance of the *Demoscope* Research Group and the Max Planck Institute for Demographic

Research (MPIDR) in 2004, 2007 and 2011[7]. The period of the survey covers time before and after the 2007 pro-natal family policy measures introduction, and therefore suits well for the aim of this study.

The regression analysis presented in the paper is based on a binary logistic model. This model is employed successively for full 2004-2011 panel and then for 2004-2007 and 2007-2011 semi-panel subsamples. To evaluate the impact of the family policy measures introduced in 2007 the time elapsed between the first and the third waves of the Russian GGS is divided into two intervals. The first interval covers the period from the date of 2004 survey to August 2007, while the second interval lasts from September 2007 up to the date of the 2011 survey. Thus, all the births occurred in the second interval are planned after the introduction of the 2007 family policy novelties.

Each of the subsamples used in the analysis consists of women who already had at least one child at the beginning of the observation period and were of childbearing age up until the end of this period. The dependent pair-specific dummy variable is set to 1 if a woman had a second or subsequent child within the observation period and to 0 if she had not.

As the dependent variable is binary, within the model we estimate probability of this event for different combinations of explanatory variables. In that case, the explanatory variables can be both binary and continuous, which is significant when we plan to include categorical variables in the model.

The logistic function is defined as follows:

$$F(x) = \Lambda(x) = \frac{e^x}{1+e^x} \quad (1)$$

Then the event probability (birth of a second or subsequent child) might be estimated as follows:

$$p = \frac{1}{1+e^x} \quad (2)$$

where x are independent factors or explanatory variables. If p is less than 0.5, it is considered that an event does not occur, and if p exceeds 0.5, then the event takes place. The exponential of the regression coefficients in the binary logistic regression indicate differences in chances of births corresponding to different variables.

[7] The Survey was held with the financial support of the Russian Pension Fund, the Max Planck Society for the Advancement of Science, Sberbank of Russia, the United Nations Population Fund (UNFPA), the Ford Foundation, and the Victoria Children Foundation.

The set of control variables included into the model includes two major groups. First, we control for the basic demographic characteristics of the women, namely, age group, age at the time of the first birth, partner status, number of children born by the beginning of the observation period together with the age of the youngest child at that moment, and area of living (rural or urban). Second, as economic theory of fertility emphasizes the role of socio-economic characteristics of parents in determining family and reproductive behavior, we also control for women's educational level, women's employment status and household's income level measured by self-estimation. To ensure the comparability of results between different groups of women, all characteristics, which could have changed over time, are measured at the start of each one of the two observation periods.

We start regression analysis with the full panel sample, which includes women who had participated in all three waves of the survey. The sample is limited to women who already had had at least one child at the start of the observation, i.e. at the date of the 2004 survey in this case, reported the date of his or her birth and at the same time had stayed in the reproductive age until the end of the observation period, i.e. until the date of the 2011 survey. The upper limit of reproductive is set at 49 years old. These conditions reduced the size of the analytical panel sub-sample to 1,196 observations. We also build an expanded panel sample, which included men who took part in all three waves of the survey and did not change their partner over this period. For these cases we derive all necessary data on the female partners and match it with the same conditions. This allowed us to increase the sample by 504 women, bringing it up to 1,700 observations. For each of these two panel samples, to assess the impact of the new family policy measures we reorder the files in the following way. We duplicate cases keeping all women's characteristics for 2004 in the initial lines and rewriting them with the 2007 characteristics in the new ones. After that, we add a dummy variable, which turns 0 for cases referring to the first interval, and turns 1 in other cases. We reckon that inclusion of this variable in the regression model together with all control variables allow us to instrumentalize the new measures of family policy introduced in 2007. While assessing the model, we cluster all observations by women's id in order to avoid the within-panel autocorrelation, or the influence of unobservable characteristics.

Based on the results obtained within this first part of the regression analysis we suggested that aging of the panel could somehow distort the estimates. For example, women under observation might be simply coming closer to the average age of mothers at third birth by the end of the second interval. Therefore we decided to perform the second part of the regression analysis based on the two semi-panel samples of women who had participated in 2004 and 2007 waves of the Russian GGS (1^{st} interval) or alternatively in the 2007 and 2011 waves (2^{nd}

interval). These semi-panel samples include female respondents who, as in the previous case, have already had at least one child at the beginning of the observation period and had stayed in reproductive age by the end of the interval of interest. Also to curb the negative influence of the statistically registered extremely low fertility among 45-49-years-old women in Russia on the regression outcomes we lowered the upper limit of reproductive age to 44 years. The resulting sizes of the two analytical semi-panel samples reached 1,408 and 1,104 observations respectively. For these samples we estimate similar regression models and trace the potential influence of the family policy measures introduced in 2007 through observed changes in the regression coefficients for identical control variables.

Finally, we suggest that family policy measures can increase the nearest (in three years) intentions to have a child. To capture this potential impact on the planned fertility behavior, in the second part of the regression analysis we also estimate models where the woman's intention to give at least one more child during the next 3 years served as a dependent variable.

3. DESCRIPTIVE ANALYSIS OF FERTILITY

Generally, according to the official Rosstat data, period indicator of total fertility rate (TFR) in Russia showed negative dynamics in 1990-1999, then it increased slightly in 2000-2004 and went down basically by the same amount in 2005-2006. Starting from 2007 and until now period TFR has been growing steadily among both rural and urban women (see Figure 1). Frejka and Zakharov note that fertility decline in 1990s matches the beginning of the births postponement process in Russia. In this case the growth the period TFR observed later might be one of a compensatory nature, and it might not necessarily be associated with any increase in cohort fertility (Frejka & Zakharov, 2014). At that, average age of mothers in Russia is still relatively low. According to estimates based on the unpublished Rosstat data, the average age of mothers at the time of the first birth in 2013 reached 25.2 years, and for second and third births it came up, respectively, to 29.5 and 32.2 years[8]. Thus, the current period total fertility dynamics might still be linked to the calendar effects leveling.

The same authors point to the high volatility of the period TFR growth in 2007-2014 (Frejka & Zakharov, 2014). Indeed, in 2006-2007 its increase amounted to 8.5% of the coefficient value in the first of the two years, in 2010-2011 it made only 1%, in 2011-2012 again rose by 6.8%, and in 2013-2014 increased just by 3.3%. Such fluctuations may indicate

[8] The estimates were kindly provided by Alla Tyndik (Institute for Social Analysis and Prediction at Russian Presidential Academy of National Economy and Public Administration), tyndik-ao@ranepa.ru

instability of the observed trend. Still, the official statistics data has not once detected any fertility decline since 2007.

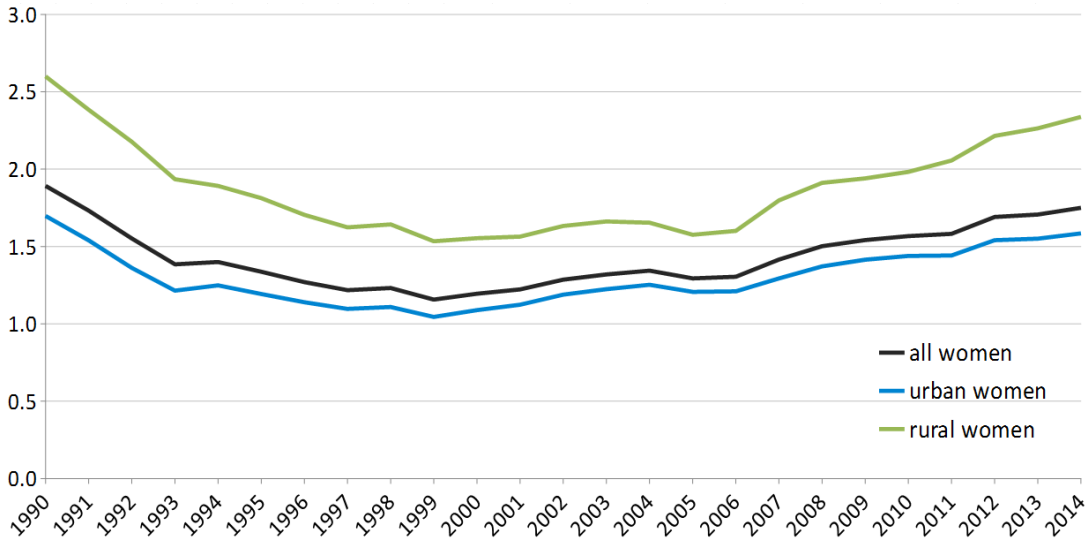


Figure 1 — Period total fertility rate dynamics in Russia, 1990-2014

Source: Rosstat data.

If we consider the frequencies of the second and consequent births in the GGS subsamples constructed for this study we also observe increase in their number. The proportions of women who gave birth within the first observation interval in the full panel sample of women respondents and in the semi-panel sample appear to be close enough to each other; the difference goes up to 0.5 percentage point only (see Tables 1 and 2). Then, the proportion of women who had a second or subsequent child within the second observation interval is higher when compared to proportion of those in the first interval in both panel samples, although statistically insignificantly (Table 1). The same is true for the semi-panel samples — the corresponding proportion is higher in the second interval than in the first one. There the increase is stronger; it goes from 7.3% up to 11% of women, and, according to the Pearson's chi-square test, this change is significant at the 0.01 level (Table 2).

In the panel sample including stable partners of male respondents, share of women who had another child born in each of the intervals goes higher. We attribute this to the fact that this sample is biased towards stable partnerships, where men and women are in principle more prone to have children. And a moderate growth in the proportion of women who had a second or subsequent child in the second observation interval in both panel samples might be a consequence of the sample ageing. Due to the fact that Russian fertility remains relatively young, shifting age structure of women by three years can affect birth frequencies significantly. Therefore, we believe that these descriptive statistics support the hypothesis of the possible positive effect of the 2007 family policy changes on overall fertility.

Table 1 — Frequencies of second and subsequent births in the panel sample

	Interval 1		Interval 2	
	Abs.	Sample %	Abs.	Sample %
Sample of female respondents				
A woman had not another child born	1115	93.23	1104	92.31
A woman had another (second or subsequent) child born	81	6.77	92	7.69
Total	*1196*	*100.00*	*1196*	*100.00*
Differences in the distributions are not statistically significant. $\chi^2 = 1.60$ (df = 1).				
Sample of female respondents and of stable partners of male respondents				
A woman had not another child born	1575	92.65	1563	91.94
A woman had another (second or subsequent) child born	125	7.35	137	8.06
Total	*1700*	*100.00*	*1700*	*100,00*
Differences in the distributions are not statistically significant. $\chi^2 = 1.24$ (df = 1).				

Source: Calculations based on the Russian GGS data.

Table 2 — Frequencies of second and subsequent births in the two semi-panel samples

	Interval 1		Interval 2	
	Abs.	Sample %	Abs.	Sample %
A woman had not another child born	1305	92.68	983	89.04
A woman had another (second or subsequent) child born	103	7.32	121	10.96
Total	*1408*	*100.00*	*1104*	*100.00*
Differences in the distributions are significant at 0.01 level. $\chi^2 = 82.60$ (df = 1).				

Source: Calculations based on the Russian GGS data.

As mentioned above, within this study we also examined changes in fertility intentions basing on the semi-panel samples data. Generally, fertility intentions with regard to the nearest future are also higher in the semi-panel sample constructed for the second interval of observation than in the sample for the first period. Overall 19.6% of women under observation stated positive intentions towards having another child in the coming three years in the first period, whereas in the second period share of those grew up to 22.3% (see Table 3). At that increase in the share of women affirming strong positive intention to have a child was rather small. This might indicate a shift in fertility calendar and does not necessary denote an actual cohort total fertility growth, but it points to some fertility changes.

Table 3 — Fertility intentions of women in the two semi-panel samples

		Interval 1		Interval 2	
		Abs.	Sample %	Abs.	Sample %
Intentions to have another child in the coming 3 years	Definitely not	817	58.03	569	51.54
	Probably not	297	21.09	276	25.00
	Probably yes	182	12.93	170	15.40
	Definitely yes	94	6.68	76	6.88
System missing		*18*	*1.28*	*13*	*1.18*
Total		*1408*	*100.00*	*1104*	*100.00*
Differences in the distributions are significant at 0.01 level. $\chi^2 = 21.16$ (df = 3).					

Source: Calculations based on the Russian GGS data.

Thus, in our view, the data described in this section provides some evidence in favor of positive effect of the new family policy measures introduced in 2007 on overall fertility outcomes and fertility intentions.

4. DESCRIPTIVE ANALYSIS OF GROUP DIFFERENCES

Before moving on to the regression analysis we study differences observed between women included into panel and semi-panel samples, and also between women who had or had not a second or subsequent child within the observation period.

The principal feature of the (full) panel sample is its aging from the first observation interval to the second one. It shifts upwards women's age structure in the second observation interval, and influences distribution of women by the age of the youngest child at the start of the second observation period and by total number of their children.

Besides, the proportions of rural population in the full panel samples are significantly higher than those in the semi-panel samples (see Tables A1, A2 and A3 in Appendix). In addition, the latter are, in turn, higher than the proportion of rural population reported by Rosstat for the country as a whole[9]. We attribute this to the higher mobility of the urban population (Evsyukov & Zhukova, 2012), especially in terms of local (intra-settlement) mobility. Therefore, urban citizens have on average lower chances of staying in the panel sample. As fertility in Russia is higher in rural areas, this might lead to overestimation of second and third births' frequencies in the data, especially in the full panel samples.

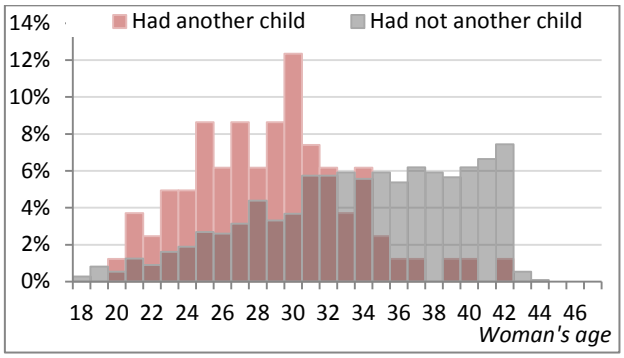
Furthermore, there are differences in the number of children between women from the panel and semi-panel samples that can affect the differences in birth occurrence discussed above. In the full panel there are less women with only one child and more women with two children in 2004. Hence, women in the full panel sample have lower chances of a new birth, particularly if they had given a birth in 2004 – September 2007.

The differences discovered in the distributions of women included into the panel and semi-panel samples by educational, employment and wealth characteristics are minor. Full sample distributions of the two panel samples are presented in the Appendix tables A1 and A2, and distributions of the semi-panel samples might be found in the Appendix table A3.

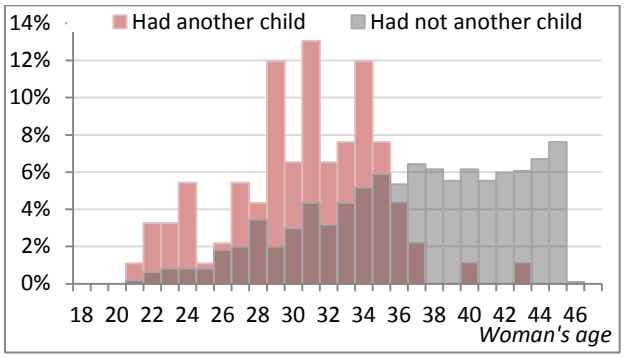
We also observe differences between the two groups of interest, namely, the women who had a second or subsequent child within the observation period and those who had not. The most obvious difference concerns age composition of these groups (see Figure 2). Both in panel and semi-panel samples the distribution of the women who had not a second or consequent child is

[9] According to the 2010 Census data, proportion of rural population in Russia came down to 26.3%.

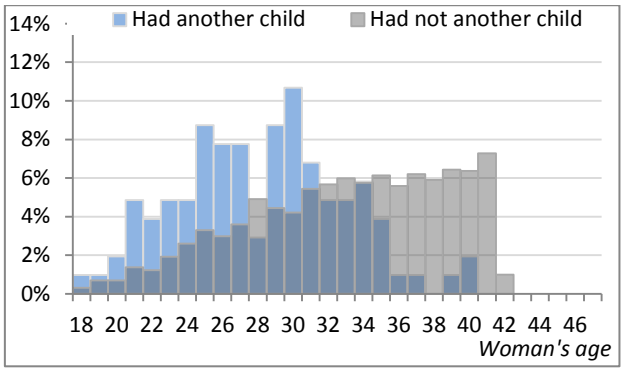
left-skewed. Those of the women who had a child seems to be symmetric and centered around the age of 28-30 years in the first observation interval, and they become more rambling in the second interval. This could probably indicate some behavioral changes occurring under the influence of the family policy measures.



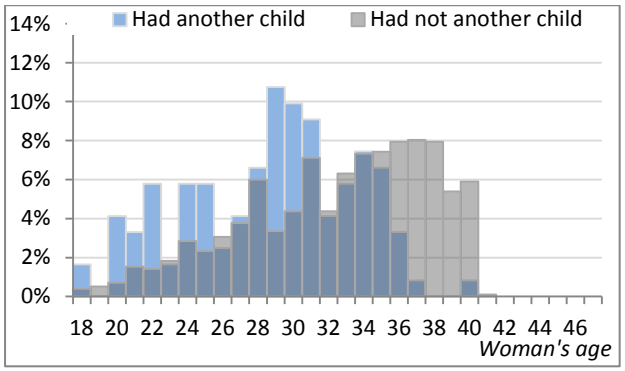
a. Panel sample (female respondents), Interval 1



b. Panel sample (female respondents), Interval 2



c. Semi-panel sample, Interval 1

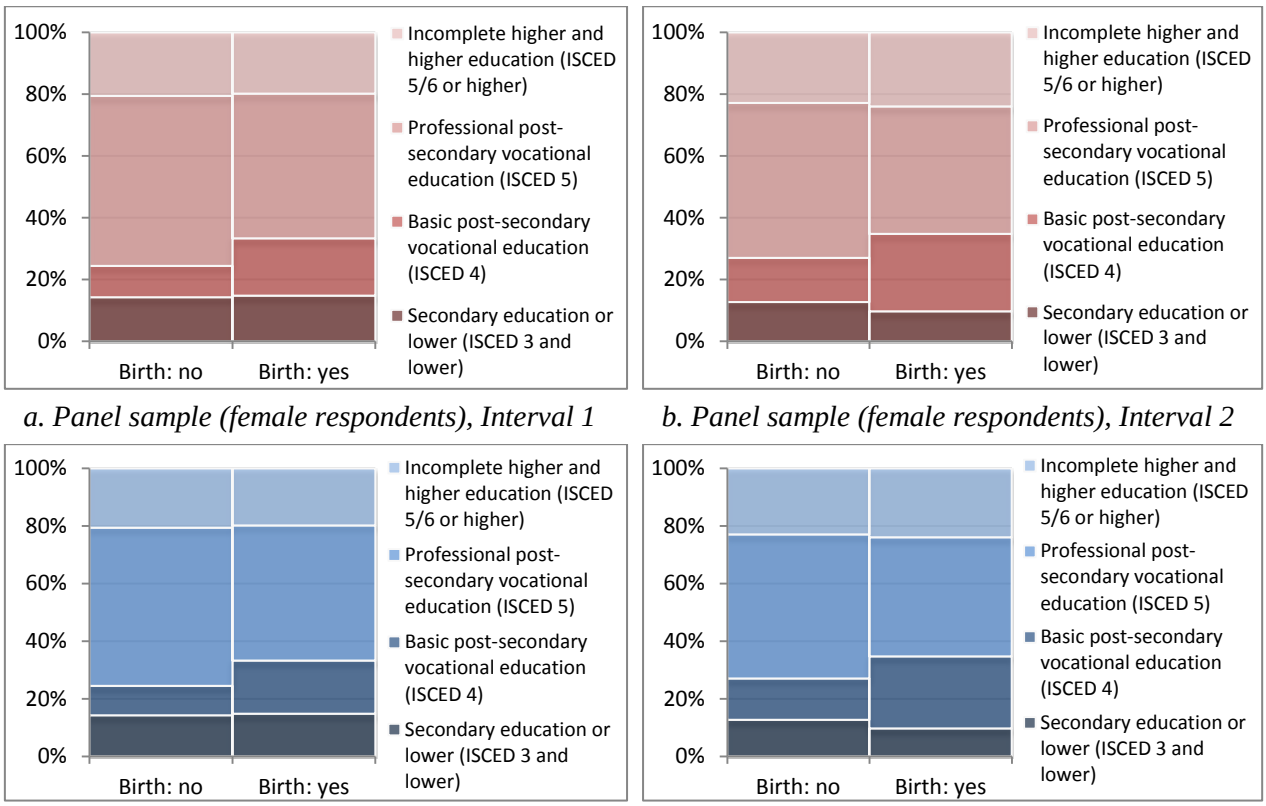


d. Semi-panel sample, Interval 2

Figure 2 — Age distribution of women who had and had not another child born at the beginning of the observation period

Source: Calculations based on the Russian GGS data.

Another important distinction between women who had and had not a second or consequent child is related to their educational level. In the panel sample we observe significant educational differences both in the first and in the second interval. Specifically, in the first interval we discover higher proportion of women with basic post-secondary vocational education (ISCED 4) among those who had another child — 18.5% against 10.2% among women who had not a child, see Figure 3. The difference is significant at the 0.05 level. In the second interval this gap between the two groups of women widens, and the difference concerning ISCED 4 education level becomes significant at the 0.01 level, while other differences remain insignificant. Generally, these results indicate a slight shift towards lowering relative educational level of women having second or subsequent children. As for the semi-panel sample, we do not observe any significant differences in the educational structure of the two groups of women.



a. Panel sample (female respondents), Interval 1

b. Panel sample (female respondents), Interval 2

c. Semi-panel sample, Interval 1

d. Semi-panel sample, Interval 2

Figure 3 — Composition of women who had and had not another child born by education level at the beginning of the observation period

Source: Calculations based on the Russian GGS data.

In addition, we see some noteworthy changes in composition of women by the income level. Thus, both in panel and semi-panel samples shares of those who estimate their household incomes as sufficient are higher among women who had another child than among those who had not. These differences are significant at the 0.01 level (see Table 4). In the second interval referring to the period after the family policy introduction we do not observe any significant differences concerning income level between the two groups of women.

Table 4 — Composition of women who had and had not another child born by self-estimated income level at the beginning of the observation period

	Interval 1				Interval 2			
	Birth: no		Birth: yes		Birth: no		Birth: yes	
	Abs.	Sample %	Abs.	Sample %	Abs.	Sample %	Abs.	Sample %
Panel sample of female respondents								
Hard to make ends meet	1034	93.83	81	86.17	990	89.67	80	86.96
Easy to make ends meet	68	6.17	13	13.83	114	10.33	12	13.04
Total	*1102*	*100.00*	*94*	*100.00*	*1104*	*100.00*	*92*	*100.00*
Semi-panel samples								
Hard to make ends meet	1196	91.65	81	78.64	866	88.10	102	84.30
Easy to make ends meet	109	8.35	22	21.36	117	11.90	19	15.70
Total	*1305*	*100.00*	*103*	*100.00*	*983*	*100.00*	*121*	*100.00*

Source: Calculations based on the Russian GGS data.

The aim of the descriptive analysis presented above is to compare the differences between the full panel and semi-panels that might be important to consider when discussing the regression results. In addition, descriptive analysis shed light on some possible correlations between important socioeconomic variables and birth occurrence. However, we need to control other important characteristics to make any firm conclusion about factors influencing births.

5. REGRESSION ANALYSIS: PANEL DATA

To find out if the 2007 policy changes had any significant impact on fertility we estimated a binary logistic regression on the basis of the full panel sample of female respondents described above in the *Method and Data* paragraph. As already noted, the dependent variable takes a value equal to 1 if a woman had a second or subsequent child within the observation period and to 0 otherwise.

The list of independent variables includes, firstly, various demographic characteristics measured at the start of each observation period, namely, woman's age, number of children she already has had, age of the youngest child, and her partner status. Assuming that entering a (new) relationship may affect fertility behavior, we also control for changes in woman's partner status during the observation period in our model. As to the age age-related characteristics, we use two different variables — woman's age group at the start of observation and woman's generation, or birth cohort. Here we expect the *age group* variable to control for age-specific effects and to approximate the remaining length of the fertile interval. And the so-called *generation* variable should absorb cohort effects, that is, those arising from the fertility model evolution. The first one of these variables might change when we shift from one interval to another, while the latter remains stable.

Apart from that, the list of independent variables covers a number of socio-economic characteristics, specifically, woman's educational level and employment status at the start of the observation period, income level of her household measured by self-estimation, and also type of her living area (rural or urban).

Now, as we control for all the characteristics mentioned above, the independent testing variable — an *interval* dummy included into the model — should then reflect the effects caused by the new 2007 family policy measures.

The woman's age expectedly appears to be one of the strongest factors influencing the probability of having a second or subsequent child within the observation period. Generally, the higher is the age at the beginning of the observation, the lower are the chances to have another baby, though we observe almost no difference between groups of 25-29 and 30-34-year-olds.

Chances to have another child over the observation period for women from these age groups are 2.5 times lower than for the youngest ones. Compared to the same group, the chances for those aged 35-39 are 5.9 times lower, and for women over 40 years old — 14.3 times lower (see Table 5). Generation effects are less significant and indicate higher chances of a second or subsequent birth among women born in 1970s. The odds ratios estimation for the youngest cohort of women (born in 1980 or later) are lower, though insignificant, which should be partially attributed to the fact, that they have just started their fertility careers.

Table 5 — Odds ratios for second and subsequent births' occurrence.
Estimates from the binary logistic regression models. Panel samples

		Sample of female respondents		Sample of female respondents and stable partners of male respondents	
		Odds ratios	Std. Err.	Odds ratios	Std. Err.
Area of living	Urban (REF)	1		1	
	Rural	1.23	0.22	1.35*	0.19
Age of a woman at the start of observation	18-24 years old (REF)	1		1	
	25-29 years old	0.42*	0.17	0.60	0.19
	30-34 years old	0.40	0.21	0.68	0.25
	35-39 years old	0.17**	0.11	0.43	0.19
	40-47 years old	0.07**	0.07	0.24*	0.15
Generation (birth cohort) of a woman	1960-1969 (REF)	1		1	
	1970-1974	3.13*	1.58	3.02**	1.02
	1975-1979	3.23	2.00	4.66**	1.84
	1980-1986	1.79	1.35	3.63**	1.76
A woman's highest education level at the start of observation	Secondary education or lower (ISCED 3 and lower, REF)	1		1	
	Basic post-secondary vocational education (ISCED 4)	2.07*	0.67	2.17**	0.57
	Professional post-secondary vocational education (ISCED 5)	0.91	0.27	1.14	0.26
	Incomplete higher and higher education (ISCED 5/6 or higher)	1.04	0.36	1.28	0.34
Number of children a woman already had at the start of observation	1 (REF)	1		1	
	2 or more	0.33**	0.07	0.39**	0.07
Age of the woman's youngest child at the start of observation	0-1 years old (REF)	1		1	
	2-3 years old	2.10	0.93	1.92	0.64
	4-6 years old	4.07**	1.98	3.91**	1.39
	7-15 years old	2.89*	1.46	2.73**	0.99
	16 years old and older	1.95	1.40	1.18	0.70
A woman's partner status at the start of observation	Does not have a partner (REF)	1		1	
	Has a partner	3.78**	1.04	3.74**	0.99
New partner during the observation period	No (REF)	1		1	
	Yes: found a partner or changed a partner	2.35*	0.82	2.29*	0.78
Household income status (self-estimation) at the start of observation	Hard to make ends meet (REF)	1		1	
	Not hard to make ends meet	1.11	0.29	1.02	0.23

Table 5 *continued on the next page*

Table 5 *continued*

A woman's employment status at the start of observation	Working (REF)	1		1	
	On a childcare leave	2.06	0.79	2.59**	0.76
	Jobless	1.46	0.53	1.54	0.46
	Economically inactive (including studying)	0.90	0.24	1.21	0.25
Interval	Before the introduction of new policy measures (REF)	1		1	
	After the introduction of new policy measures	1.62*	0.35	1.33	0.22
Pseudo R-squared (McFadden)		*0.22*		*0.19*	
Log likelihood		*-487.66*		*-748.13*	
χ^2 (df)		*174.52 (23)*		*242.84 (23)*	
Significance of the model		**		**	
Number of observations		*2,392 (1,196 clusters)*		*3,400 (1,700 clusters)*	

*** p < 0.01; * p < 0.05*

Note: Constant was included into the regression, but omitted from the table.
Source: Calculations based on the Russian GGS data.

Another predictably strong factor of the probability of having a second or subsequent child is woman's partnership status. According to our results, chances of having a second or subsequent child are 3.8 times higher among women who had a partner at the beginning of the observation period. Transition from single status to a relationship or change of a partner over the observation period also has a significant impact on the chances of birth, increasing it by 2.4 times.

The next factor according to its contribution to fertility was the age of the youngest child. The highest chances to have another child are observed for women with the youngest child approaching the school age, that is, aged 4-6 at the beginning of the observation period. For them chances are 4.1 times higher compared to women who had a child less than a year ago. Next are women with children of school age (chances are 2.9 times higher compared to women who had a child less than a year ago), while the odds ratios estimations coming with other age groups do not gain their significance. At the same time chances to have a baby are significantly lower for women who already have two or more children.

Socio-demographic variables generally have weaker influence on birth probabilities. The educational effects are limited to the 2.1 higher chances of having a second or consequent child observed for a group of women with basic post-secondary vocational education (ISCED 4). Coefficients of the employment status, as well as of income level and rural-urban differences, are insignificant.

Finally, estimates concerning the independent interval variable, through which we instrumetalized the 2007 policy effect, show that chances of having a second or subsequent child are 1.6 times higher in the second interval then in the first one. The odds ratios estimate is significant at the 0.05 level, and the confidence interval is rather wide, but it does not contain 1,

going from 1.06 to 2.48. Thus, our results show a positive effect of the 2007 family policy measures on the probability of the second or subsequent births.

Model estimated for the full panel sample covering male respondents with stable partners apparently gives biased, although similar in terms of influence directions, estimates. It attributes greater effect to the generation factor, provides somewhat higher estimates of the odds ratios for the number of children variable, and puts more emphasis on the educational, employment and rural-urban differences. At the same time it shows lower impact of the woman's age, the youngest child age, the partnership status and its changes (see right columns in Table 5). The latter is definitely associated with the sample bias towards the stable partnerships. Having got these results, we do not use this sample design in the further research.

We should also mention that introduction of the generation variable in addition to the age into the model reduced both the value of the odds ratios referring to our key *interval* variable in the second observation period, and its significance level. It supports the hypothesis stated by Frejka and Zakharov (2014), that positive dynamics of fertility and growing share of second and subsequent births observed in the Russian statistics might be at least partially explained by general changes in fertility model, and therefore they may be temporal.

6. REGRESSION ANALYSIS: SEMI-PANEL DATA

In the second part of analysis we regress the same independent variable against the full set of control variables we defined in paragraph 5[10], basing on the semi-panel subsamples. Here we aim to capture differences in the effects associated with various factors, suggesting that they should be related to the influence of the 2007 family policy changes.

The results obtained for the semi-panel samples are provided in the Table 6. When going from the first sample to the second one, we observe some changes in the role of the age factor. Namely, in the second interval women aged 25-29 and 40-42 display a sharper decline in the chances of having a second or subsequent child in comparison to the reference group of 18-24-year-olds, while the reverse situation arises with regard to those aged 35-39. The oppositely directed changes in the coefficients coming with the two oldest age groups might indicate changes in fertility timing. At the same time in the model referring to the second interval we record higher chances of having another child among those who already had two children by the beginning of the observation period. And this, in turn, might indicate a rise in eventual fertility outcomes.

[10] The only variable we omit in this part of the analysis is *woman's generation*. Having only one observation interval in each regression model, we face strong correlation of the age group and generation variables.

Table 6 — Odds ratios for second and subsequent births' occurrence.
Estimates from the binary logistic regression models. Semi-panel samples

		2004-2007 sample (Interval 1)				*2007-2011 sample (Interval 2)*			
		Model A		*Model B*		*Model A*		*Model B*	
		Odds ratios	Std. Err.	Odds ratios	Std. Err.	Odds ratios	Std. Err.	Odds ratios	Std. Err.
Area of living	Urban (REF)	1		1		1		1	
	Rural	1.20	0.29	1.45	0.36	1.19	0.27	1.21	0.28
Age of a woman at the start of observation	18-24 years old (REF)	1**		1**		1**		1**	
	25-29 years old	0.67	0.23	0.58	0.21	0.38**	0.14	0.33**	0.13
	30-34 years old	0.65	0.25	0.57	0.23	0.65	0.25	0.57	0.23
	35-39 years old	0.15**	0.09	0.12**	0.07	0.22**	0.10	0.18**	0.09
	40-42 years old	0.11*	0.09	0.08**	0.07	0.03**	0.03	0.02**	0.02
A woman's highest education level at the start of observation	Secondary education or lower (ISCED 3 and lower. REF)			1				1	
	Basic post-secondary vocational education (ISCED 4)			1.60	0.72			1.57	0.60
	Professional post-secondary vocational education (ISCED 5)			1.16	0.43			1.19	0.41
	Incomplete higher and higher education (ISCED 5/6 or higher)			1.70	0.70			1.52	0.60
Number of children a woman already had at the start of observation	1 (REF)	1**		1**		1**		1**	
	2	0.13**	0.06	0.15**	0.06	0.28**	0.08	0.30**	0.09
	3 or more	0.95	0.41	1.20	0.55	1.24	0.54	1.47	0.67
Age of the woman's youngest child at the start of observation	0-1 years old (REF)	1*		1**		1		1	
	2-3 years old	1.18	0.46	1.75	0.80	1.15	0.40	1.10	0.44
	4-6 years old	2.46*	0.91	4.93**	2.41	1.25	0.43	1.26	0.57
	7-15 years old	1.39	0.57	2.98*	1.56	0.86	0.32	0.91	0.43
	16 years old and older	0.47	0.54	1.12	1.36	1.15	0.70	1.28	0.88
A woman's partner status at the start of observation	Does not have a partner (REF)	1		1		1		1	
	Has a partner	7.11**	3.88	7.32**	4.11	1.39	0.30	1.35	0.29
New partner during the observation period	No (REF)	1		1		1		1	
	Yes: found a partner or changed a partner	2.40*	0.85	2.74**	1.00	1.21	0.43	1.26	0.46
Household income status (self-estimation) at the start of observation	Hard to make ends meet (REF)			1				1	
	Not hard to make ends meet			2.31**	0.68			1.21	0.35
A woman's employment status at the start of observation	Working (REF)			1				1	
	On a childcare leave			2.48*	1.05			1.07	0.45
	Jobless			0.45	0.26			3.63*	2.20
	Economically inactive (including studying)			1.32	0.42			0.89	0.30
Pseudo R-squared (McFadden)		*0.18*		*0.21*		*0.12*		*0.13*	
Log likelihood		*-300.68*		*-290.76*		*-337.06*		*-333.74*	
χ^2 (df)		*135.65 (13)*		*155.48 (20)*		*89.14 (13)*		*95.78 (20)*	
Significance of the model		**		**		**		**	
Number of observations		*1,408*		*1,408*		*1,104*		*1,104*	

*** p < 0.01; * p < 0.05*

Note: Model A includes demographic factors, whilst *Model B* covers demographic and socio-economic factors. Constant was included into the regression, but omitted from the table.
Source: Calculations based on the Russian GGS data.

Interestingly, variables characterizing woman's partnership status, as well as all socio-economic factors, that is, employment and income statuses, loose their significance when we shift from the first observation interval to the second one. One possible explanation of these results could be that the 2007 family policy measures somehow evened chances of having children for women coming from various socio-economic groups. This should mean, that the policy changes influenced women differentially, and had the most remarkable effect on those who were less disposed to the risk of second or consequent births before.

Apart from that, we note higher relative chances to have another child among women who already have two children at the beginning of the observation period, compared to those having just one child — again, in the second interval. This could indicate possible positive effect of the 2007 family policy changes on the fertility outcomes.

Regressions of the same configuration estimated for fertility intentions for three years following the survey show an increase in relative chances to state positive fertility intentions among jobless women, compared to working, in the second interval. It might point to possible selectivity of the 2007 family policy changes (see Table 7). Due to their monetary nature they could have worked better for disadvantaged population groups. However, the regressions for fertility intentions do not provide fully consistent results, showing opposite influence directions for some parameters in the two observation intervals. Therefore we reckon that the relationships discussed within this paragraph should be studied further.

Table 7 — Odds ratios for positive fertility intentions in the next 3 years. Estimates from the binary logistic regression models. Semi-panel samples

		2004-2007 sample (Interval 1)				*2007-2011 sample (Interval 2)*			
		Model A		*Model B*		*Model A*		*Model B*	
		Odds ratios	Std. Err.	Odds ratios	Std. Err.	Odds ratios	Std. Err.	Odds ratios	Std. Err.
Area of living	Urban (REF)	1		1		1		1	
	Rural	2.20**	0.39	2.15**	0.39	0.80	0.14	0.79	0.15
Age of a woman at the start of observation	18-24 years old (REF)	1**		1*		1**		1**	
	25-29 years old	2.10	0.93	2.02	0.91	1.35	0.44	1.36	0.47
	30-34 years old	2.34	1.06	2.11	0.98	1.58	0.55	1.57	0.59
	35-39 years old	4.60**	2.22	4.35**	2.16	0.61	0.23	0.58	0.24
	40-42 years old	3.88*	2.06	3.67*	2.00	0.15**	0.10	0.12**	0.08
A woman's highest education level at the start of observation	Secondary education or lower (ISCED 3 and lower. REF)			1				1	
	Basic post-secondary vocational education (ISCED 4)			1.15	0.41			1.72	0.56
	Professional post-secondary vocational education (ISCED 5)			1.30	0.36			1.90*	0.55
	Incomplete higher and higher education (ISCED 5/6 or higher)			0.72	0.25			1.86	0.61

Table 7 *continued on the next page*

Table 7 *continued*

Number of children a woman already had at the start of observation	1 (REF)	1		1		1**		1**	
	2	0.87	0.18	0.85	0.17	0.24**	0.05	0.23**	0.05
	3 or more	1.14	0.34	1.19	0.37	0.38*	0.16	0.43	0.19
Age of the woman's youngest child at the start of observation	0-1 years old (REF)	1		1		1		1	
	2-3 years old	0.77	0.27	0.68	0.27	0.60	0.17	0.52*	0.17
	4-6 years old	0.53	0.19	0.43*	0.19	0.82	0.22	0.71	0.25
	7-15 years old	0.60	0.20	0.47	0.19	0.60	0.17	0.58	0.20
	16 years old and older	0.71	0.30	0.54	0.27	0.39*	0.18	0.37	0.20
A woman's partner status at the start of observation	Does not have a partner (REF)	1		1		1		1	
	Has a partner	1.55	0.42	1.59*	0.43	1.57**	0.26	1.54*	0.26
New partner during the observation period	No (REF)	1		1		1		1	
	Yes: found a partner or changed a partner	0.74	0.29	0.76	0.30	0.39*	0.14	0.40*	0.15
Household income status (self-estimation) at the start of observation	Hard to make ends meet (REF)			1				1	
	Not hard to make ends meet			0.73	0.27			1.13	0.26
A woman's employment status at the start of observation	Working (REF)			1				1**	
	On a childcare leave			0.68	0.28			0.77	0.26
	Jobless			0.66	0.24			4.68**	2.61
	Economically inactive (including studying)			0.55*	0.16			1.62	0.41
Pseudo R-squared (McFadden)		*0.05*		*0.06*		*0.15*		*0.16*	
Log likelihood		*-478.37*		*-471.75*		*-495.00*		*-487.24*	
χ^2 (df)		*48.45 (13)*		*61.70 (20)*		*174.65 (13)*		*190.19 (20)*	
Significance of the model		**		**		**		**	
Number of observations		*1,408*		*1,408*		*1,104*		*1,104*	

*** p < 0.01; * p < 0.05*

Note: Model A includes demographic factors, whilst *Model B* covers demographic and socio-economic factors. Constant was included into the regression, but omitted from the table.
Source: Calculations based on the Russian GGS data.

7. CONCLUSIONS AND DISCUSSION

This study assesses how family policy changes introduced in 2007 were related to the fertility behavior in Russia in recent years. Although the maternity (family) capital program is the most well-known innovation of 2007 family policy reform, it is a mistake to attribute all observed effects only to this measure. It has a very limited and delayed effect on the families' well-being because of very strict rules of using the maternity (family) capital grant. We believe that changes introduced in the same year with regard to the system of child benefits, primarily, to the rules of monthly childcare allowance assignment had a much greater impact on disposable income of families with children and should be considered as a major component of the 2007 family policy reform. Since all measures were introduced simultaneously, the only possibility is to estimate their cumulative effect on subsequent fertility behavior.

Our study reveals that, controlling for all demographic and socioeconomic factors, there is a statistically significant increase in the probability of second and subsequent births in September 2007 to Summer 2011 in comparison with the period of Summer 2004 to September 2007. We can interpret that as a cumulative effect of the 2007 policy changes. However, we acknowledge that the observed effects might be related only to the calendar shifts in fertility behavior. Based on our data, we cannot make any conclusions about completed fertility of the cohorts affected by 2007 family policy reform yet.

With regard to the effects of other characteristics of women correlated with fertility outcomes, our study confirms evidence from previous research that demographic factors are more strongly correlated with the probability of second and consequent births than socioeconomic characteristics. Partner status and age are still the most powerful factors in explaining fertility outcomes.

Another interesting result of our study is that cohort changes not only have a positive impact on period fertility but the inclusion of the cohort variable into the model lowers odds ratios for the interval variable. This means that observed growth in the probability of second and subsequent births can be partially explained by the ongoing changes in the national fertility model.

Our study has several limitations. First, within this paper we do not consider the national welfare or family policy on the whole and use a single-policy approach, which can in fact lead to over- or underestimation of the policy effects (Thevenon, 2011; Neyer, 2013). However, sociological theory stresses that differences among welfare regimes in the level of decommodification and defamilialization as well as in the coverage by social programs can affect the life courses of individuals including their fertility decisions (Mills and Blossfeld, 2005). Besides, reviewing the welfare state parameters contributes to the results greatly if we can tell to what extent the policy of our interest builds into the national welfare regime. At the same time, there is a lack of the empirical literature on the potential effects of the welfare state regimes on the fertility (Balbo *et al.*, 2013). Also, to reveal the effects of the different welfare arrangements on fertility we need a cross-country comparative data (Bradshaw & Attar-Schwartz, 2011). Furthermore, according to Russian experts, the national welfare policy in this country is still very fragmented and does not match any of the common typologies (Sidorina, 2005). Therefore, we believe that in this study broadening of the policy context would not undermine the conclusions.

Second, we have to admit some methodological shortcomings. We are not able to introduce policy variables in our models directly, which complicates methodology and imposes additional restrictions on the sample under review. Another important feature is that our analysis

covers a relatively short period of four years after the introduction of new family policy measures and does not include years of further fertility growth. Finally, limited number of observations and also of events (births) hamper in a more detailed analysis of the factors associated with fertility behavior.

Nevertheless, we see some space for improving the quality of our results. We intend to study more closely relations between age and cohort variables in order to interpret the observed effects correctly. In addition, we plan to test selectivity of the family policy measures introduced in 2007 by estimating regression models with interactions between interval and socio-demographic variables.

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Appendix

Table A1 — *Sample distributions for full 2004-2011 panel sample, female respondents only*

		Interval 1		Interval 2	
		column %	abs.	column %	abs.
		100.0	*1,196*	*100.0*	*1,196*
Age of a woman at the start of observation	18-24 years old	7.94	*95*	3.26	*39*
	25-29 years old	17.64	*211*	11.20	*134*
	30-34 years old	27.26	*326*	21.99	*263*
	35-39 years old	27.51	*329*	28.18	*337*
	40-47(44) years old	19.65	*235*	35.37	*423*
Area of living	Rural	40.64	*486*	-〃-	-〃-
	Urban	59.36	*710*	-〃-	-〃-
Number of children a woman already had at the start of observation	1	50.42	*603*	44.90	*537*
	2	49.58	*593*	53.60	*641*
	3 or more	-	-	1.51	*18*
Age of the woman's youngest child at the start of observation	0-1 years old	11.20	*134*	3.51	*42*
	2-3 years old	11.96	*143*	8.28	*99*
	4-6 years old	16.64	*199*	16.81	*201*
	7-15 years old	46.15	*552*	42.89	*513*
	16 years old and older	14.05	*168*	28.51	*341*
A woman's partner status at the start of observation	Has a partner	75.67	*905*	75.84	*907*
	Does not have a partner	24.33	*291*	24.16	*289*
New partner during the observation period	Yes: found a partner or changed a partner	7.53	*90*	5.18	*62*
	No	92.47	*1,106*	94.82	*1,134*
A woman's highest education level at the start of observation	Secondary education or lower (ISCED 3 and lower)	14.30	*171*	12.88	*154*
	Basic post-secondary vocational education (ISCED 4)	10.79	*129*	15.13	*181*
	Professional post-secondary vocational education (ISCED 5)	54.43	*651*	50.59	*605*
	Incomplete higher and higher education (ISCED 5/6 or higher)	20.48	*245*	21.40	*256*
A woman's employment status at the start of observation	Working	70.99	*849*	79.77	*954*
	On a childcare leave	9.28	*111*	3.43	*41*
	Jobless	6.86	*82*	3.43	*41*
	Economically inactive (including studying)	12.88	*154*	13.38	*160*
Household income status (self-estimation) at the start of observation	Hard to make ends meet	92.14	*1,102*	89.46	*1,070*
	Not hard to make ends meet	7.86	*94*	10.54	*126*

Note: Numbers may not add to 100 due to rounding.
Source: Calculations based on the Russian GGS data.

Table A2 — *Sample distributions for full 2004-2011 panel sample, female respondents and stable partners of male respondents*

		Interval 1		Interval 2	
		column %	abs.	column %	abs.
		100.0	*1,700*	*100.0*	*1,700*
Age of a woman at the start of observation	18-24 years old	6.29	*107*	2.41	*41*
	25-29 years old	16.71	*284*	9.71	*165*
	30-34 years old	26.53	*451*	21.41	*364*
	35-39 years old	28.29	*481*	27.65	*470*
	40-47(44) years old	22.18	*377*	38.82	*660*
Area of living	Rural	40.29	*685*	-"-	-"-
	Urban	59.71	*1,015*	-"-	-"-
Number of children a woman already had at the start of observation	1	49.76	*846*	44.00	*748*
	2	49.82	*847*	53.82	*915*
	3 or more	0.41	*7*	2.18	*37*
Age of the woman's youngest child at the start of observation	0-1 years old	12.41	*211*	2.47	*42*
	2-3 years old	11.35	*193*	8.06	*137*
	4-6 years old	18.53	*315*	17.65	*300*
	7-15 years old	45.12	*767*	45.47	*773*
	16 years old and older	12.59	*214*	26.35	*448*
A woman's partner status at the start of observation	Has a partner	82.88	*1,409*	83.00	*1,411*
	Does not have a partner	17.12	*291*	17.00	*289*
New partner during the observation period	Yes: found a partner or changed a partner	5.29	*90*	3.65	*62*
	No	94.71	*1,610*	96.35	*1,638*
A woman's highest education level at the start of observation	Secondary education or lower (ISCED 3 and lower)	16.06	*273*	15.41	*262*
	Basic post-secondary vocational education (ISCED 4)	10.29	*175*	14.06	*239*
	Professional post-secondary vocational education (ISCED 5)	52.76	*897*	48.35	*822*
	Incomplete higher and higher education (ISCED 5/6 or higher)	20.88	*355*	22.18	*377*
A woman's employment status at the start of observation	Working	69.41	*1,180*	78.06	*1,327*
	On a childcare leave	10.18	*173*	3.82	*65*
	Jobless	6.47	*110*	3.24	*55*
	Economically inactive (including studying)	13.94	*237*	14.88	*253*
Household income status (self-estimation) at the start of observation	Hard to make ends meet	91.47	*1,555*	88.82	*1,510*
	Not hard to make ends meet	8.53	*145*	11.18	*190*

Note: Numbers may not add to 100 due to rounding.
Source: Calculations based on the Russian GGS data.

Table A3 — *Sample distributions for semi-panel samples 2004-08.2007 (Interval 1) and 09.2007-2011 (Interval 2)*

		Interval 1		Interval 2	
		column %	*abs.*	column %	*abs.*
		100.0	*1 408*	*100.0*	*1 104*
Age of a woman at the start of observation	18-24 years old	9.80	*138*	6.34	*70*
	25-29 years old	20.45	*288*	18.12	*200*
	30-34 years old	27.49	*387*	27.36	*302*
	35-39 years old	28.55	*402*	35.96	*397*
	40-42 years old	13.71	*193*	12.23	*135*
Area of living	Rural	35.30	*497*	34.33	*379*
	Urban	64.70	*911*	65.67	*725*
Number of children a woman already had at the start of observation	1	54.55	*768*	54.62	*603*
	2	36.65	*516*	39.40	*435*
	3 or more	8.81	*124*	5.98	*66*
Age of the woman's youngest child at the start of observation	0-1 years old	13.35	*188*	12.32	*136*
	2-3 years old	13.49	*190*	14.49	*160*
	4-6 years old	17.33	*244*	21.38	*236*
	7-15 years old	44.89	*632*	41.85	*462*
	16 years old and older	10.94	*154*	9.96	*110*
A woman's partner status at the start of observation	Has a partner	83.74	*1,179*	58.79	*649*
	Does not have a partner	16.26	*229*	41.21	*455*
New partner during the observation period	Yes: found a partner or changed a partner	7.81	*110*	6.43	*71*
	No	92.19	*1,298*	93.57	*1,033*
A woman's highest education level at the start of observation	Secondary education or lower (ISCED 3 and lower)	13.64	*192*	13.13	*145*
	Basic post-secondary vocational education (ISCED 4)	10.65	*150*	14.40	*159*
	Professional post-secondary vocational education (ISCED 5)	53.55	*754*	50.63	*559*
	Incomplete higher and higher education (ISCED 5/6 or higher)	22.16	*312*	21.83	*241*
A woman's employment status at the start of observation	Working	67.90	*956*	71.83	*793*
	On a childcare leave	11.08	*156*	10.96	*121*
	Jobless	6.75	*95*	2.17	*24*
	Economically inactive (including studying)	14.28	*201*	15.04	*166*
Household income status (self-estimation) at the start of observation	Hard to make ends meet	90.70	*1,277*	87.68	*968*
	Not hard to make ends meet	9.30	*131*	12.32	*136*

Note: Numbers may not add to 100 due to rounding.
Source: Calculations based on the Russian GGS data.

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