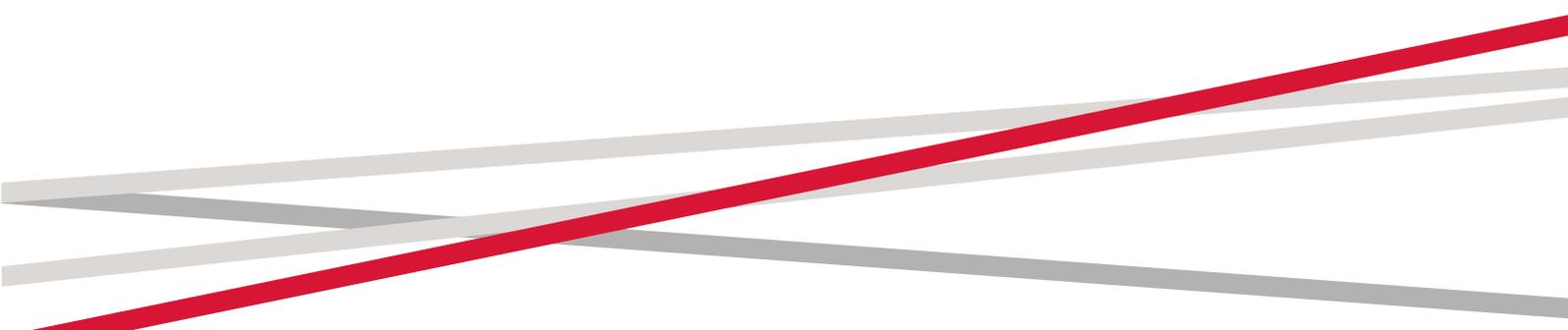


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# Short-Run and Long-Run Effects of Sizable Child Subsidy: Evidence from Russia

How to design the optimal pro-natalist policy is an important open question for policymakers around the world. Our paper utilizes a large-scale natural experiment aimed to increase fertility in Russia. Motivated by a decade-long decrease in fertility and population, the Russian government introduced a sequence of sizable child subsidies (called Maternity Capitals) in 2007 and 2012. We find that the Maternity Capital resulted in a significant increase in fertility both in the short run and in the long run. The subsidy is conditional and can be used mainly to buy housing. We find that fertility grew faster in regions with a shortage of housing and with a higher ratio of subsidy to housing prices. We also find that the subsidy has a substantial general equilibrium effect. It affected the housing market and family stability. Finally, we show that this government intervention comes at substantial costs.



In all European and Northern American countries the fertility is below the replacement level (United Nations, 2017). Following this concern, most of the developed countries have implemented various large scale and expensive pro-natalist policies. Yet, the effectiveness of these policies is unclear, and the design of the optimal pro-natalist policy remains a challenge.

There are several important open research questions on the evaluation of these programs. The first is whether these programs can induce fertility in the short-run and/or in the long-run horizon. Indeed, very few of these expensive and large-scale policies are proved to be an effective tool to increase fertility (Adda et al, 2017). The next set of questions deals with further evaluation of the programs: What are the characteristics of families that are affected by this policy? How costly is the policy, i.e. how much is the government paying per one birth that is induced by the policy? Finally, what are the non-fertility related effects of these policies? While most of the studies that analyze the effect of pro-natalist policies concentrate on fertility and mothers' labor market outcomes, these, usually large-scale, policies may have important general equilibrium and multiplier effects that may affect economies both in the short run and long run (Acemoglu, 2010).

In our paper we utilize a natural experiment aimed to increase fertility in Russia to address these questions.

Motivated by a decade-long decrease in fertility and depopulation, the Russian government introduced a sizable conditional child subsidy (called Maternity Capital). The program was implemented in two waves. The first wave, the Federal Maternity Capital program, was enacted in 2007. Starting from 2007, a family that already has at least one child, and gives birth to another, becomes eligible for a one-time subsidy. Its size is approximately 10,000 dollars, which exceeds the country's average 18-month wage and exceeds the country's minimum wage over a 10-year period. The recipients of the subsidy can use it only on

three options: on housing, the child's education, and the mother's pension. Four years later, at the end of 2011, Russian regional governments introduced their own regional maternity programs that give additional – on the top of the federal subsidy – money to families with newborn children.

In our paper, we document that the Maternity Capital program results in a significant increase in fertility rates both in the short run (by 10%) and in the long run (by more than 20%). This effect can be seen from both within-country analysis and from comparing the long-term growth of fertility rates in Russia with Eastern and Central European countries that face similar economic conditions and had similar pre-reform fertility trends. Like Russia, Eastern European countries experienced a drop in fertility rates right after the collapse of the Soviet Union and had similar trends in fertility up until 2007. Our results show that while having similar trends in fertility before 2007, afterward Russia significantly surpassed all the countries from this comparison group.

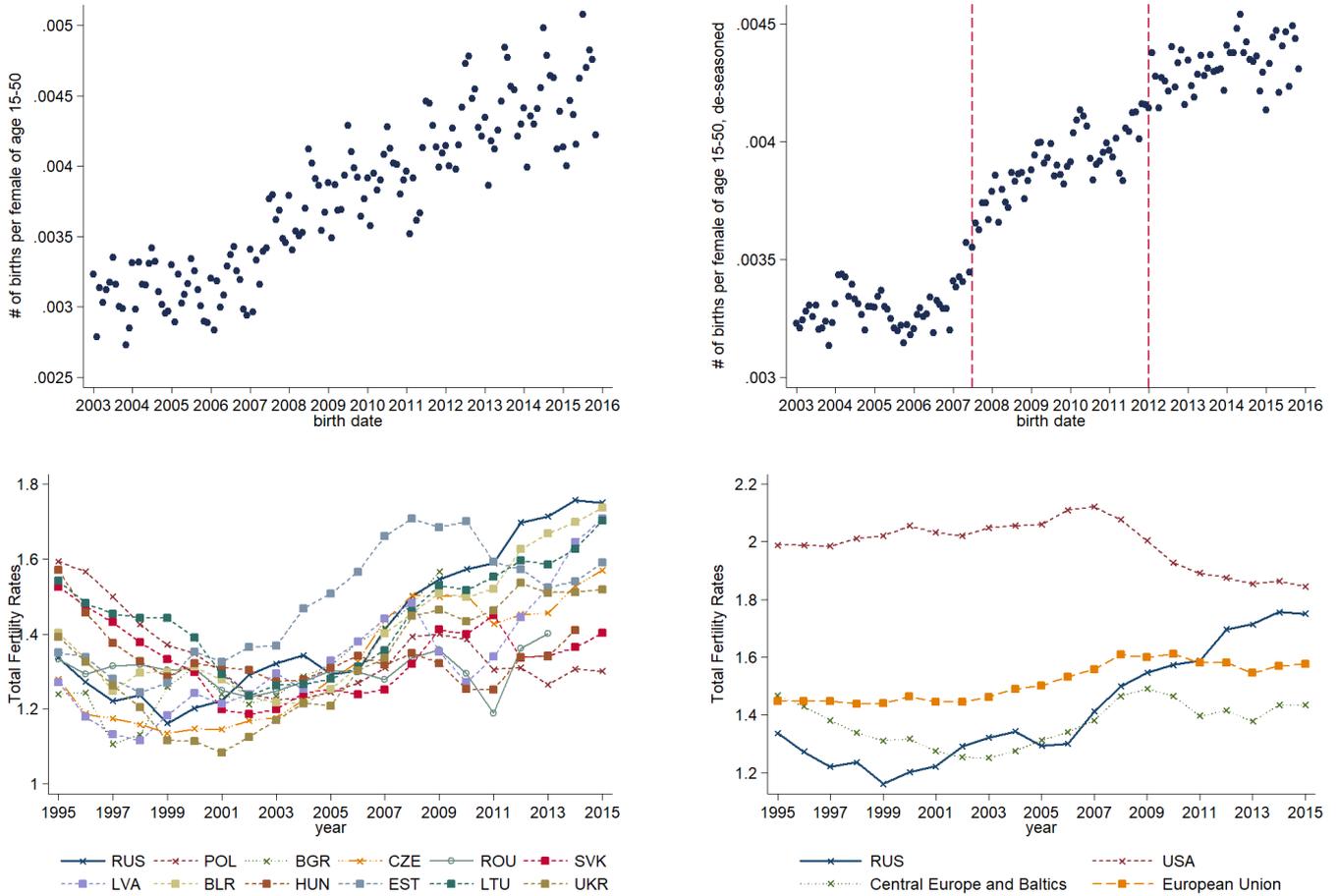
Figure 1 illustrates the effect of the Maternity Capital on birth rates. The top two panels show monthly birth rates (simple counts and de-seasoned); the bottom panels show total fertility rates in Russia versus Eastern European countries, and versus the European Union and the US.

The effects of the policy are not limited to fertility. This policy affects family stability: it results in a reduction in the share of single mothers and in the share of non-married mothers.

Also, the policy affects the housing market. Out of three options (education, housing and pension), 88% of families use Federal Maternity Capital money to buy housing. We find that the supply of new housing and housing prices increased significantly as a result of the program. Confirming a close connection between the housing market and fertility, we find that in regions where the subsidy has a higher value for the housing market, the program has a larger effect: the effect of maternity capital was stronger,

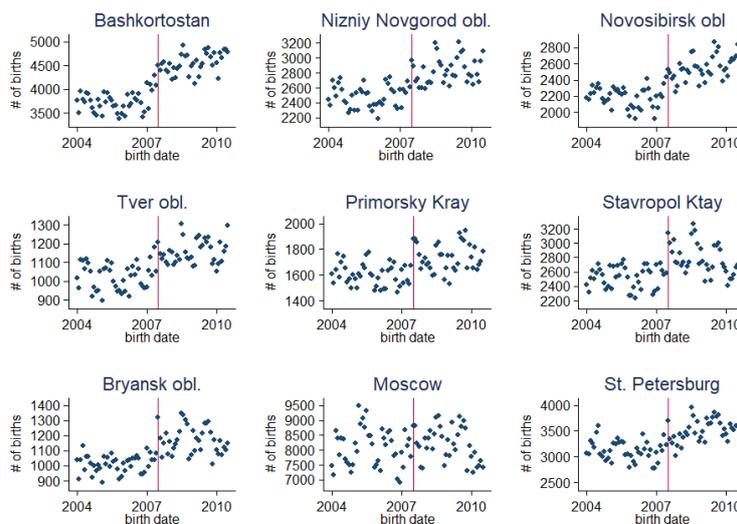


Figure 1. Total Fertility Rate, Russia, Eastern European countries, USA and EU.



Source: Sorvachev and Yakovlev (2019), and <http://www.fertilitydata.org/>.

Figure 2. Effect of Federal Maternity capital, by regions



Source: Sorvachev and Yakovlev (2019), and <http://www.gks.ru/>.



both in the short run and long run, in regions with a shortage of housing, and in regions with a higher ratio of subsidy to price of apartments (i.e. those regions where the real price of subsidy as measured in square meters of housing is higher).

Figure 2 above shows the effect of Federal Maternity Capital on birth rates in different regions. It shows no effect on fertility in Moscow, small effect in Saint-Petersburg; whereas sizable effect of maternity capital in other Russian regions.

These results suggest that cost-benefit analysis of such policies should go beyond the short-run and long-run effects on fertility. Ignoring general equilibrium issues may result in substantial bias in the evaluation of both short-run and long-run costs and benefits of the program.

While there are many benefits of the program, we show that this government intervention comes at substantial costs: the government's willingness to pay for an additional birth induced by the program equals approximately 50,000 dollars.<sup>1</sup>

For more detailed evaluation of the results see Evgeny Yakovlev and Ilia Sorvachev, 2019, "Short-Run and Long-Run Effects of Sizable Child Subsidy: Evidence from Russia", NES working Paper # 254, 2019.

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<sup>1</sup> Roughly, the WTP (US\$50,000) exceeds nominal US\$10,000 subsidy because government pays for all (100%) families that give birth to a child to induce additional (20%) increase in fertility. See paper for more accurate elaboration.





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