

# **STIMULATING FERTILITY WITH MONETARY PRO-NATAL POLICIES - HOW EFFECTIVE IS IT?**

## **EVALUATING RECENT RUSSIAN EXPERIENCE**

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Session 19. Socio-economic drivers of fertility

# Presentation layout

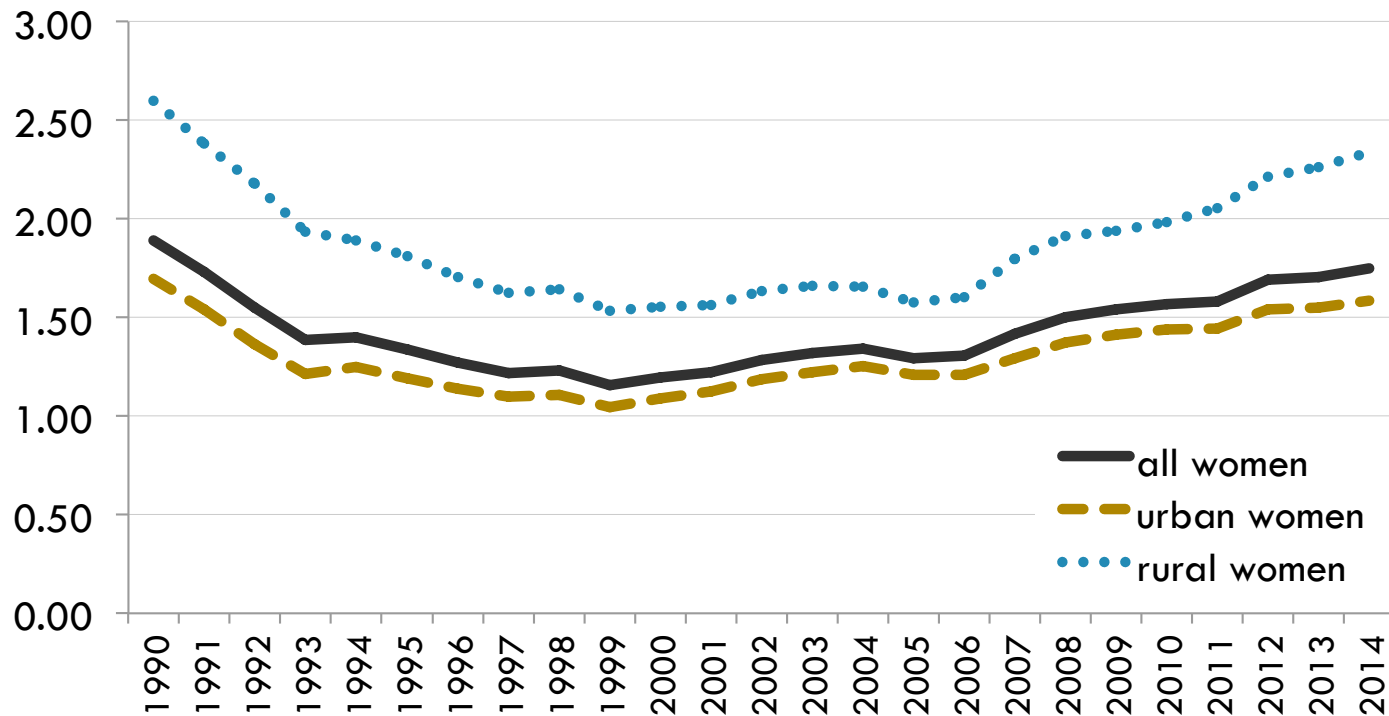
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- Context of the research
- Theoretical background
- Data and method
- Descriptive results
- Regression analysis results
- Conclusions and discussion

# CONTEXT. Fertility dynamics

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- Starting from 2007 and until now period TFR has been growing steadily among both rural and urban Russian women
- High volatility of the period TFR growth in 2007-2014 (Frejka & Zakharov, 2014)



**Figure 1. TFR dynamics, 1990-2014**

Source: Rosstat data

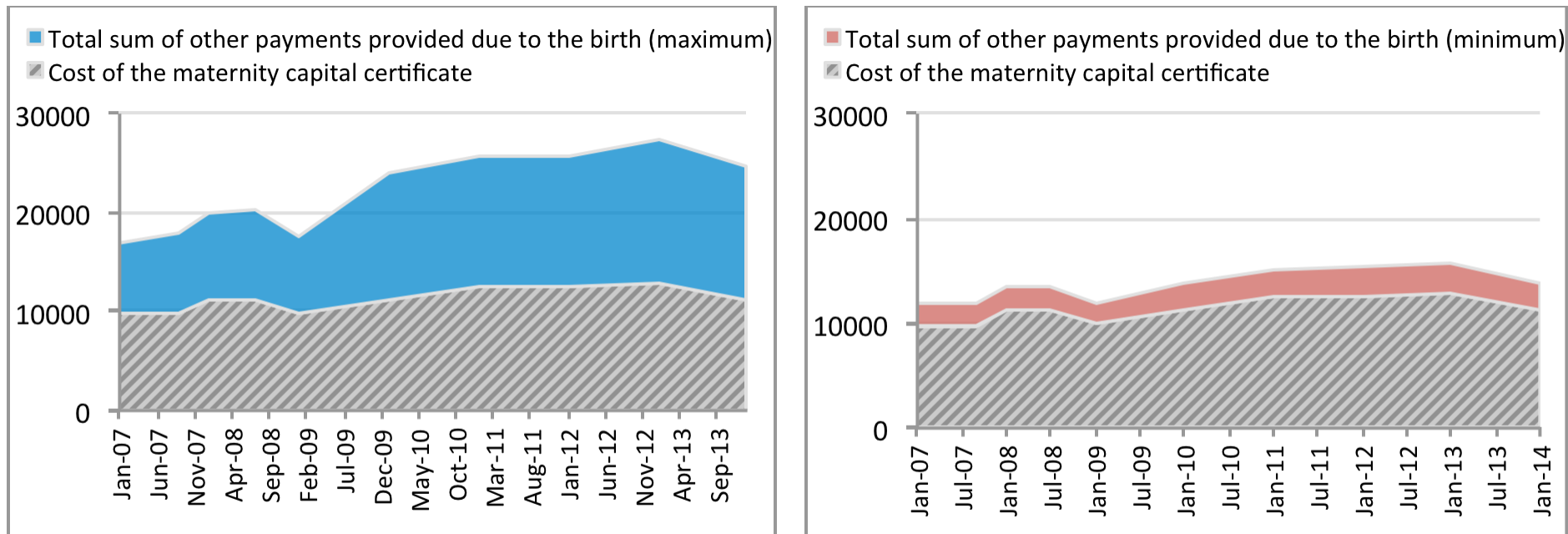
# CONTEXT. Policy changes

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- **Lump-sum birth grant set for those who had their child born, adopted or fostered**  
Set at 8,000 rubles in 2007 and reached 14,497.8 rubles due to the annual indexation in 2015;
- **Maximum size of the monthly allowance paid to working mothers during their maternity leave increased by almost 1.5 times**  
Went up 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;
- **Monthly childcare allowance for children under 1.5 years old extended to non-working women. Rules of the entitlement to the childcare allowance paid during parental leaves 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. This upper-limit was once again increased in 2011 and got up to 12,555 rubles/month by 2015. 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;
- **Maternity (family) capital program launched**  
The maternity certificate was worth 250,000 rubles in 2007, and by 2015 its value went up to 453,026 rubles.

# CONTEXT. Which policy changes matter?

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**Figure 2. Maternity capital certificate cost and other payments provided due to the child birth during the childcare leave in US dollars at the average US/Rub exchange rate**

*Source: Estimates based on the Rosstat data*

# Motives for the research and research question

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Have the measures of Russian pro-natal policy introduced in 2007 increased probability of second and consequent births?

Do we observe any variation in their effect on different social groups of women?

The policy is expensive (MC program). Broad discussion on its effectiveness in Russia, both in academic and governmental circles. Program ends in 2018 – to prolong or not to prolong?

Another case of monetary policies aimed to increase fertility. Broad discussion on its possible effects in academic papers

# Theoretical background (1)

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## Family policy and fertility

- Economic theory predicts that the effect of birth-related allowances on fertility would be most probably positive (Becker, 1991)
- It might not lead to higher fertility if families decide to use this money to increase quality of children (Gauthier, 2007)
- Some models predict the effect of different policy instruments on the timing of the (first) births (Cigno & Ermisch, 1989; Walker, 1995).
- 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 (see reviews Gauthier, 2007 & 2008)

# Theoretical background (2)

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## Country cases

- 25% increase in fertility of families whose childbearing decisions were made exactly during the existence of the Allowance for the Newborn Children in the Quebec province of Canada in 1988-1997 (Milligan, 2002)
- Substantial (by 7.8%) increase in fertility in Israel induced by the mean level of governmental child subsidies (Cohen, et al., 2007)
- 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 (Brewer et al., 2008)
- Significant effects of the bonus at birth introduced in Italy in 2000 on the reproductive decisions of low educated women related to higher-order (second and particularly third) births (Boccuzzo et al., 2008)
- A modest growth of the birth rate in response to Baby Bonus in Australia in 2004 (Drago et al., 2009; Parr and Guest, 2011)



# Data

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- Russian Generations and Gender Survey  
Full 2004/ 2007/ 2011 panel (5622)  
Two observation periods 2004-Aug. 2007 (before) & Sep. 2007-2011 (after)
- Subsample of 1196
  - women
  - having at least one child at the start of observation
  - staying in the reproductive age by the end of observation
- Pooled panel sample
  - Duplicate all cases and add new binary variable (policy) which takes 1 for all copies
  - Keep all fixed characteristics untouched: **type of living area, year of birth, age at first birth**
  - For changing characteristics put 2004 values in original cases and 2007 for copies: **age, level of education, employment status, partner status, total number of children, age of the youngest child, income level**

# Method (1)

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- Set of binary logistic regressions
  - ▣ Dependent variable turns 1 if a woman had a second or subsequent child within the observation period and to 0 if she had not
  - ▣ Cluster observations by ID
  - ▣ Two groups of controls

## **Socio-demographic characteristics**

- type of her living area (rural/urban)
- woman's age, generation of birth
- number of children she already had
- age of the youngest child
- partnership status
- change of partner status in the observation period

## **Socio-economic characteristics**

- educational level
- employment status
- income level (self-estimation)

# Method (2)

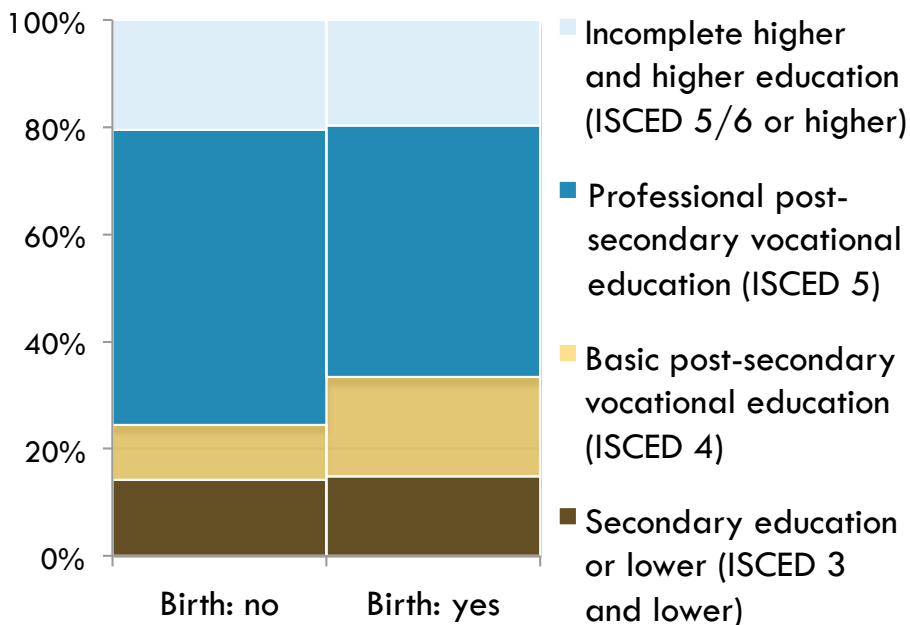
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- ▣ Instrumentalize the new measures of family policy introduced in 2007 by binary variable ‘policy’
  
- ▣ Estimate 2 sets of models
  - 2004-Aug. 2007 (before) & Sep. 2007- mid-2011 (after) —  
unequal length of exposure to risk
  - 2004-Aug. 2007 (before) & Sep. 2007- early 2011 (after) —  
inexact measurement of certain covariates

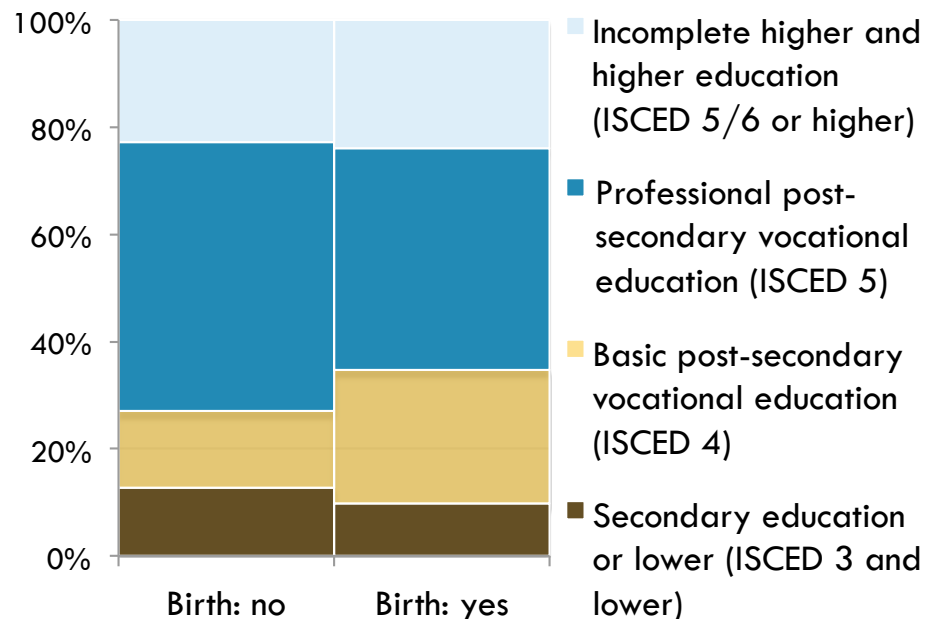
# Results. Educational structure

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## Interval 1



## Interval 2



Within intervals: higher proportion of women with basic post-secondary vocational education (ISCED 4) among those who had another child

- 18.5% against 10.2% in Interval 1 (difference significant at 0.05 level)
- 23% against 13.8% in Interval 2 (difference significant at 0.01 level)

No statistically significant differences between intervals

# Results. Income structure

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	Interval 1				Interval 2			
	Birth: no		Birth: yes		Birth: no		Birth: yes	
	Abs.	%	Abs.	%	Abs.	%	Abs.	%
'Hard to make ends meet'	1 034	92.7	68	84.0	990	89.7	80	87.0
'Easy to make ends meet'	81	7.3	13	<b>16.0</b>	114	10.3	12	<b>13.0</b>
<i>Total</i>	<i>1 115</i>	<i>100.0</i>	<i>81</i>	<i>100.0</i>	<i>1 104</i>	<i>100,0</i>	<i>92</i>	<i>100.0</i>

In Interval 1 share of those who estimate their household incomes as sufficient are higher among women who had another child than among those who had not (significant at 0.01 level).

In interval 2 this difference vanishes.

# Results. Regression analysis. Summary

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	Intervals determined by field work calendar		Intervals of equal length	
Demographic variables	yes	yes	yes	yes
Socio-economic variables		yes		yes
<b>Period = after</b> <i>(odds ratio)</i>	1.64*	1.67**	1.28	1.27
Model	***	***	***	***

## Most influential demographic controls

- Partnership status (has a partner – odds ratio app. 3.5-4) & change of partner during the observation period (odds ratio app. 2.5-3)
- Age of the youngest child (4-6 y.o. – odds ratio app. 4)
- Mother's age (highest chances among the youngest & aged 30-34)

## Most influential socio-economic controls

- Education (ISCED 4 – odds ratio app. 2)

# Conclusions and Discussion

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- Probability of second and consequent births did not increase after the introduction of the new family policy measures in 2007
- Influence of these policy measures might be selective. Although including interactions in the models with significant coefficients does not confirm this hypothesis, we still assume there might be some positive effect for low-income women and women without higher education
- The observed fertility dynamics (TFR) apparently should still be attributed to the temporary compensatory increase and effects associated with the ongoing ageing of Russian fertility model (Zakharov, 2013; Frejka & Zakharov, 2014)

Thank you!

If you are interested in further details please contact me at  
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# Results. Frequencies

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	Interval 1		Interval 2	
	Abs.	%	Abs.	%
	Intervals determined by field work calendar			
Second or consequent birth: no	1 115	93.2	1 104	92.0
Second or consequent birth: yes	81	6.8	92	8.0
<i>Total</i>	<i>1 196</i>	<i>100.0</i>	<i>1 196</i>	<i>100.0</i>
	Intervals of equal length			
Second or consequent birth: no			1126	94.1
Second or consequent birth: yes			70	5.9
<i>Total</i>			<i>1 196</i>	<i>100.0</i>