

# Another child in Russia

*An analysis of the impact of different socio-economic factors on  
desire to have another child in Russia*

**Sambor Maria**



Department of Economics

UNIVERSITETET I OSLO

## **Preface**

I would like to thank my supervisor professor Øystein Kravdal for his support and encouragement during this project. At many stages in the course of this research I benefited from his advice, particularly so when exploring new ideas. His patience and understanding during these difficult years gave me power to finish the research. His careful editing contributed enormously to the production of this thesis.

I would like to thank my dear husband and my sweet daughter who made me laugh even when it was almost impossible.

Maria Sambor

Oslo, May 2008

---

## Contents

<b>Preface</b>	<b>i</b>
<b>Contents</b>	<b>ii</b>
<b>1. Introduction</b>	<b>1</b>
<b>2. Theoretical framework</b>	<b>3</b>
<b>3. The Russian setting</b>	<b>6</b>
3.1 Fertility trends	6
3.2 Family and marriage	7
3.3 Abortion and contraception	8
3.4 Women's employment	8
3.5 Consumption, incomes and poverty	9
3.6 Family policies	12
<b>4. Data and methods</b>	<b>16</b>
4.1 Data	16
4.2 Statistical model	16
4.3 Variables	17
<b>5. Results</b>	<b>21</b>
5.1 Introductory description	21
5.2 Regression model	25
<b>6. Conclusion</b>	<b>32</b>
<b>References</b>	<b>34</b>

## 1. Introduction

Russia has experienced vastly different economic and political systems over the last century. Following a period with substantial reforms undertaken by the communist regime shortly before it gave up power in the early 1990s, the country has seen a gradual transformation from a planned economy to a democratic market economy. This has been accompanied by severe cuts in public spending and economic uncertainty and income drops for large groups of the population (while others have managed to accumulate an enormous wealth).

During the last two decades, fertility has also fallen dramatically. While the total fertility rate (see definition below) was 2.1 in 1985, it had fallen to 1.34 in 1995 and 1.17 in 2004 (Goskomstat Rossii, State Committee on Statistics of Russian Federation, 2008). Regardless of mortality, a persistent fertility below 2 will inevitably lead to a decline in the population size in the long run in the absence of net in-migration. Indeed, since Russia also has high mortality and little net immigration, a strong decline is projected. According to UN forecasts, the population of Russia may be only 112 millions in 2050 - 31 millions below its present size (from the speech of Vladimir Putin "On Raising Russia's Birth Rate" Population and Development Review, June 2006).

In principle, fertility may be reduced because of increasing childbearing costs. In demography, these costs are typically considered as having two components: 'direct costs', which are the expenses for food, clothes etc., and 'indirect costs' or 'opportunity costs', which are the parents' (usually the mother's) loss of income as a result of having a child to care for. If it is relatively easy for mothers to work because of inexpensive high-quality child care, and there is a generous maternity leave system and large child allowances, childbearing costs will be lower. Such kind of support to families with children were quite well developed in the Soviet Union, and some worsening occurred during the early post-communist period (see elaboration below), but there was not a major set-back, so it is not obvious that increasing childbearing costs are an important driving force behind the lower fertility.

---

Low incomes for men, who typically do not stay home to look after a child, is another possible reason for the currently low fertility, though the basis for such a hypothesis is also rather weak. Given childbearing costs, it is reasonable to expect that a low purchasing power will reduce fertility. However, when incomes are low, it is likely that direct childbearing costs are low as well, because people may feel that they do not need to spend so much on each child. Thus, one cannot readily conclude that low income leads to low fertility (e.g. Becker 1991). An effect in this direction has been seen in some studies, including one from Russia (Kharkova and Andreev 2000), but not in others. A low fertility is perhaps particularly likely when there is a quite rapid *decline* in income, because the expectations about what to spend on each child to a large extent may be influenced by *earlier* earnings. In support of that, fertility-depressing effects of male unemployment have been seen even in countries with generous social support systems (Kravdal 2001a).

Another possible reason for the reduced fertility is that the liberalization opened up alternatives to spending time and money on children. For example, new consumer goods became available and it was easier to travel abroad. In addition, there has been a further drift away from marriage, driven to some extent by value changes (see below).

In recent years, Russian authorities have become worried about the low fertility, but just as there is uncertainty about the reasons for its decline, it is hard to know what one should do to bring it up again. One might for example just wait for a general economic improvement, hoping that it would lead to higher fertility, or one might increase incomes for families (without increasing opportunity costs, which would be the situation if women's earnings were increased without good child care solutions), by taking from other segments of the population. A less uncertain approach would be to subsidize childbearing costs, and this is precisely what the Putin administration started doing in 2006, by establishing a so-called family or maternal capital of 250000 rubles and upgrading child care benefits (see details below). In principle, one might also increase fertility by stimulating people's childbearing preferences or by changing social norms, but that is difficult and has not been tried. For obvious reasons, it has not been suggested to make contraception and abortion less accessible either.

To summarize, the idea behind the current population policy is that there are large opportunity and direct costs of childbearing that can be reduced through political interventions, while there is more doubt that generally higher wages among people in reproductive ages would increase fertility. The intention of the present analysis is to assess the plausibility of these assumptions by checking how several different economic variables that indicate incomes and opportunity costs affect childbearing desires.

More precisely, I estimate regression models for the probability of wanting another child among women who already have at least one child, using survey data. Most of the analysis is further restricted to the married or cohabiting. The models include family income in the survey month (the sum of the two partners' incomes) and two indicators of the income level over a longer period. In addition, they include the woman's education, which is an important determinant of her wages and thus the opportunity costs of childbearing, and whether she was employed at the time of interview. Further motivation for this choice of variables is given below.

The text is organized as follows: First, I present a theoretical framework. After that, I describe the Russian setting, with emphasis on the economic situation and the family and population policies. Then, I present the data, the statistical approach and the variables included in the models, and finally, I present the results and draw conclusions.

## **2. Theoretical framework**

The Eastrelin-Easterlin (1987) framework is often used in fertility analysis. According to that framework – or rather a version of it that considers a woman's chance of having another child - a woman's fertility is determined by three main factors. The first is the 'supply' of children or 'natural fertility', which is her chance of having a child if nothing is done actively to reduce fertility. It is determined by whether she lives in a sexual relationship, the amount of sexual activity, and her ability to conceive (and her partner's ability to contribute to that) and bring a pregnancy to term. The latter is in turn partly dependent on whether the woman breastfeeds an older child. Whether she breastfeeds (for a

---

certain number of months after birth) may to some extent be determined by social norms. In some societies, but not in Russia, there are also norms against sexual activity during a certain period of time after birth, or after having become a grandmother. If people abide by these norms, we would still say that they have ‘natural fertility’, that their fertility is equal to the ‘supply’, or that their fertility is not under individual control (though it may still be under ‘social control’).

The second main factor in the Easterlin-Crimmins framework is the ‘demand’ side or the ‘childbearing desires’, i.e. whether the woman (after discussion with her partner) would like to have another child. The expected mortality may be taken into account in such considerations. If one realizes that there is a large chance that a child will die, one may want to have, say 5, to be quite sure that 3 survives. This issue is of little relevance in Russia, where child mortality after all is quite low.

The number of children one would like to see surviving depends partly on the couple’s purchasing power and the expected costs of childbearing. There are two main components of the latter: ‘direct costs’ (e.g. clothes and food) and ‘opportunity costs’ (loss of labour income for the partner who stays at home with the child, and who is largely the mother). Besides, given childbearing costs and purchasing power, there may be differences in the perceived emotional rewards from having and rearing children compared to the satisfaction one might get from an alternative use of time and money: Some people take great pleasure in being with children and seeing them grow up; others would prefer, say, activities with friends, expensive hobbies or luxury goods. These ‘preferences’ for childbearing also affect the childbearing desires. Finally, there are likely to be norms about the number of children one should have, most notably a strong pressure to have at least one and preferable two children (but perhaps only if married), and perhaps also norms about appropriate timing. One may consider these explicit fertility norms a fourth determinant of the childbearing desires. In addition, there may norms about for example mothers’ work, which have implications for childbearing costs.

The third main determinant of the chance of having a child is the access to and accept of abortion and various types of efficient contraception.

---

In Russia and other developed countries, the ‘demand’ side is particularly important for completed fertility, which is also the reason why I focus on that component. Most people are sufficiently fecund and in a sexual relationship for a sufficiently long period to be able to have many more children than they would like to have, but they do regulate their fertility, so they end up having the number of children they want (‘fertility desires’) plus a few due to inadequate contraception that is not fully compensated for by abortion (abortion is very common in Russia; see below).

Let me elaborate a little on the economic determinants of the fertility desires if the woman is married or cohabiting. Consider first the situation where she does not work and does not intend to work, regardless of future childbearing. If her partner has a high income, one might assume that she (they) were more likely to want another child than if he had a low income. However, as mentioned earlier, people who are rich will also feel that they should spend more than others on each child. They may perhaps also attach more value to the material luxuries that compete with childbearing. Thus, those with a stable high income do not necessarily have more children than those with stable low incomes (e.g. Becker 1991) However, it is possible that a sharp *decline* in income, for example as a result of unemployment, depresses fertility, because the aspirations may need time to change. They may reflect the higher incomes in past years (or perhaps the economic situation of other people, which may not have deteriorated).

If paid work is an alternative for the woman, the argument becomes more complex. If she has to stay home, say, 5 years to care for a child, but otherwise would have worked, having a child means that she would lose about  $5 \times 1800$  times her hourly wage. This is the ‘opportunity costs’ of childbearing (Sinyavskaya 2007). Obviously, a woman with high wage potential has most to lose. She would also contribute more to the family income during the period she does work, but the effect of that – the so-called ‘income effect’ - is not necessarily positive, as just pointed out, and even if it were, it may be outweighed by the negative contribution from the higher opportunity costs. It is widely believed that women with a high wage potential have low fertility, all else similar.

Unfortunately, data on wage potentials are scarce. However, the educational level of a woman is often available in data used for fertility analysis, and it is documented that



---

education reduces fertility (e.g. Cleland and von Ginneken 1988). One main argument is the higher opportunity costs among the better educated, but there are also other possible explanations, such as more efficient contraceptive use.

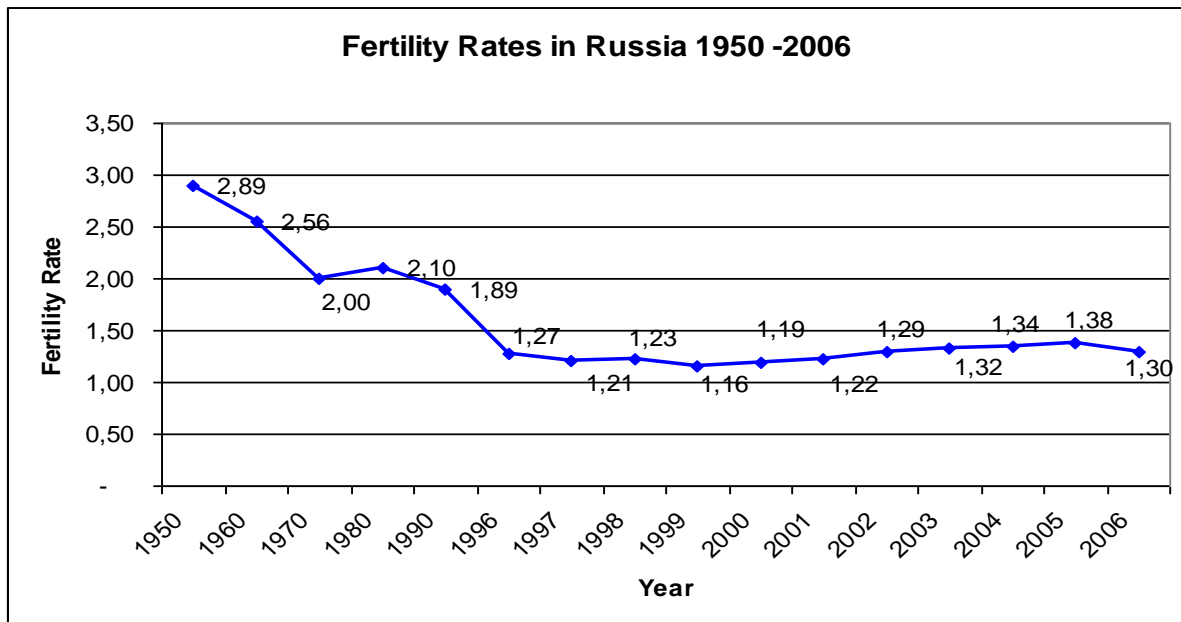
So far, it has been assumed that the woman is married or cohabiting. If she is not, her fertility desires are likely to be weaker, for obvious reasons (and if she is not even sexually active, the ‘supply’ will be zero as well). There may also be differences between cohabitants and married, because of norms against out-of-wedlock childbearing or the degree to which the woman expects that there is a partner to rely on in the future for economic and other support, but I will not take this into account in this analysis. Anyway, note that there also is a possibility of an opposite causation: People may, for example, marry or remain married because they already have had or expect a child.

### **3. The Russian setting**

#### **3.1. Fertility trends**

The development of the period total fertility rate (the average number of children that women would have during their lives if they, at every age, experience the birth rate observed for women at that age in the year in focus) is shown in Figure 1. After a decline in the 1950s and 1960s, a quite stable level in the 1970s and 1980s and further reduction after the political restructuring, the level has been quite stable at 1.1-1.4 since the mid-1990s. This currently low level reflects both that women end up with quite few children and that the age at birth is increasing. (If the number of children that women have is constant, but the age at birth increases over some years and then stabilizes, the period total fertility rate will first decline and afterwards return to its earlier level.) For example, the average age at first delivery was 29 in 1999 compared to 25 in 1989 according to Spielauer, Koytcheva and Kostova (2007). These authors also reported that in 1989, 6% of women aged 40 were childless and 28% had only one child, while the corresponding numbers in 1999 were 14% and 53%.

*Figure 1. Total fertility rate in Russia 1950 - 2006*



### 3.2. Family and marriage

As other developed countries, Russia has experienced marked changes in marriage and divorce over the last decades. For example, the proportion of women aged 20-40 who are married was reduced by 7% (from 60% to 53%) from 1989 to 2002 (State Statistics Organization, 2002). The proportion never-married increased from 13% to 18%, and the proportion divorced from 8% to 11%. This movement away from marriage is to a large extent compensated for by informal cohabitation (among those in a relationship, 77% were married and 23% cohabitant in 2004). It is widely believed that these changes are partly a result of ideas about individual freedom (from religious doctrines about living arrangements) and women's growing independence.

There has also been an increase in out-of-wedlock fertility. 10,6 % of unmarried one-child mothers in 1980 increased till 14,6% in 1990 and till 21,1 % in 1995. In the material of the year 2003 that I analyze, 27% of the one-child mothers are not married.

### **3.3. Abortion and contraception**

Because of poor access to contraceptives, abortion rates have been much higher in Russia than in the West, though some improvement has been made in recent years. In 1987, the average Russian woman had 3,5-4 abortions during her reproductive life, and in 1960 the figures were even higher, though there is much uncertainty about this since the information about abortions (and infant mortality) was confidential at that time. Since 1988, there has been much concern about the high abortion rates (partly because of the consequences for subsequent fecundity and reproductive health; e.g. Avdeev and Monnier 1996), and family programs that propagandized healthy contraception were initiated. According to various estimates, the average Russian woman now has 2-2,5 abortions during her reproductive life. It is especially important that the number of abortions has been reduced among the young.

### **3.4 Women's employment**

The chauvinistic family model, where one partner provides for the family, was quite popular in Russia for many decades. It was caused mainly by lower level of earnings among women compared to men, which was in its turn caused by discrimination on the basis of sex in when applicants were selected for job and in job promotion, as well as structural unemployment, since women's skills often did not match the requirements of the offered job (Bridger and Kay, 1996; Lubyova and Sabirianova, 2001). However, during the Soviet time, the majority of the women were employed. Both better- and less-educated women were supposed to work, and the Soviet government provided them with jobs.

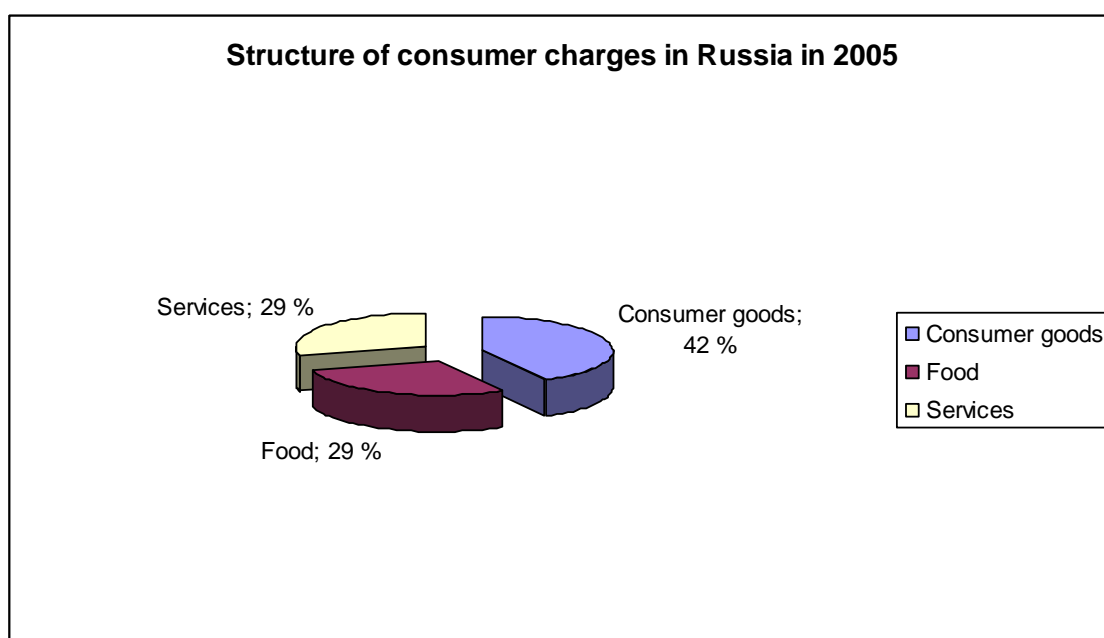
In 1992, shortly after the political restructuring, 52% of the women were employed. The corresponding proportion later in that decade was 54% (Kapelushnikov, 2008). According to an investigation by Evans and Kelley (2001), which covered the late 1990s, 15% of mothers with pre-school children were primarily home-makers, 10% worked part time and 75% worked full time. In my material, which is from the year 2003, 68% of the women with at least 1 child were employed and 8% were on paid or unpaid leave. The

remaining 24% were non-employed or unemployed. As in other countries, men's employment rates are higher than women's. Men also earn 15-20% more than women even within a given position (Kolisnichenko, 2008).

### 3.5. Consumption, incomes and poverty

The cumulative incomes of the population in Russia in 2005 were about 12.5 trillion rubles or 440 billion US dollars. This is equal to three thousand dollars per year or 250 dollars (7500 rubles) per month per person of the population. As shown in Figure 2, almost half of the income is spent on consumer goods such as footwear, clothes, medicines, and housing, 29% is spent on food, and another 29% on 'services', such as municipal housing transport, traveling, hairdressing salons, and entertainment.

*Figure 2. Structure of consumer charges in Russia in 2005 (State Committee on Statistics of Russian Federation)*



For families with children, the distribution of the expenses differs from the national average, of course. During the first year of its life, when the parents also receive support from the state, the child eats either breast milk or a dairy mix that is rather inexpensive. However, some money also needs to be spent on clothes, diapers, footwear, toys etc. At the time when parents may consider having a second child, the costs of the first one may be quite high compared to the total family income.

According to State Committee (2005), 9% of the Russian population in 2005 had an income below 1500 rubles per person, and 25% had incomes between 1500 and 2000. The poverty level was set at 2200 rubles, which is above the official 'living wage' but below the one I have calculated (see below) according to the average prices for the food. Note, by the way, that the widely used poverty line of 1 USD per day used in many global discussion of poverty corresponds to about 2000 rubles monthly.

People below the poverty line include in particular pensioners, members of large or incomplete families, invalids, and people with serious alcohol or drug problems. Besides, doctors, teachers, the state and municipal employees working in light industry and the other workers may receive wages of 3000-5000 rubles per month at the eight-hour working day which is less than average wage level. When calculating the 'living wage' (the minimum amount needed for survival), the government has taken into account expenses for essential food, consumption goods and services (Federal law 2005). This 'living wage' forms a base for a social policy to support the poorest groups of the population. In theory, the 'minimal wage' and the 'minimal old age pension' should be above the 'living wage'. The 'living wage' is currently 1804 rubles, of which the 'food basket' is 1709 rubles (Table 1). The minimal living wage for the family of two members is supposed to be 3920 rubles or 1960 rubles per person per month.

*Table 1. Living wage, food basket and other charges in Russia (2005)*

	Rubles	USD equivalent
Living wage	1804	69
The “food basket”:	1709	65
Food	873	33
Consumer goods	412	16
Services	424	16
Charges on obligatory payments and gathering	95	4

Table 2 shows the Russian ‘food basket’ of the year 2005. Using the following prices for its the various components:

Bread, flour, macaroni, grouts – 16 rubles for 0,5 kg

Meet – 250 rubles for 1 kg

Fish – 200 rubles for 1 kg

Potato – 50 rubles for 1 kg

Vegetables – 30 rubles for 1 kg

I calculated its total price as 2200, not 873 rubles as budgeted by the government.

If we add the 836 rubles for consumer goods and services, we get 3036 rubles against budgeted 1709 rubles. This huge gap demonstrates that 36% of Russian population with earnings under 2000 rubles level can not afford the minimum consumption budgeted for 1 person.

*Table 2. Food basket of 2005 in Russia*

	Gram
Bread, flour, macaroni, groats	366
Meat	102
Fish	44
Potato	295
Vegetables	266

### 3.6 Family policies

In contrast to the political efforts made to reduce fertility in some countries, such as China, Russia now has a policy that is explicitly pro-natalist. In the Soviet period, the family policy probably contributed positively to fertility although the primary intention was to release women's work potential, for the benefit of the national economy.

Childbearing has long been subsidized by the government. The level of the subsidies has varied considerably over time, however. Absolute amounts as well as amounts relative to the salary (which is a highly relevant measure because of devaluations of the rubles and inflation) are shown in Table 3 for the three years 1981, 1995 and 2006. In 1981 and 1996, all mothers who had been previously employed were paid the same absolute amount regardless of their salary. In 2006, however, the monthly subsidy – paid out during the first year of the child's life - was 40% of the official salary, but not more than 16125 rubles. Hence, woman with a salary above 41 000 rubles per month have a cost of childbearing that those who earn less do not have. There was also a lower limit of 1500 rubles.

If we compare the 1981 amount, which was 35 rubles (20% of the average salary in 1981) and the 2006 amount, which was 2800 rubles (40% of the average salary in 2006) in

natural food units, we come to the following: for this money in 1981 people could buy 4-5 kg of sausages or 25-30 l of milk, or 50-60 kg of bread (Rybakovskiy, 2001), while in 2006 for 2800 rubles (40% of the average salary) people could buy 7 kg of sausages, 93 l of milk and 90 kg of bread. These simple calculations show that in 2006 employed women with average and higher income have got better government support in a qualitative sense.

Subsidies for the non-employed women depend on the number of children. Currently, those with 2 children are in an even better situation than employed women who earn less than 11000 rubles, because unemployed women get 4500 for 2 children – each month during one year - while the latter would get 40% of an amount less than 11000, which is less than 4500 rubles. The highest possible amount of child allowance for the non-employed in 2006 was 6000 rubles (which is 80% of the average salary). It means that no matter if there are 3 or 4 children in the family; the maternity allowance will not exceed 6000 rubles.

In addition to this monthly support to employed and non-employed women, a lump sum is paid at the time of birth. Presently, the sum for one child is 7000 rubles, regardless of whether it is the first, second or higher-order child. There is also a cash grant of 500 rubles from the government that is paid out every month until the child turns 16 years old.

To summarize, for a non-employed woman who has given birth to a second child, the support for this child is 7000 rubles (lump-sum) plus 3000 rubles pr month (welfare payment) plus 500 rubles pr month (additional cash-grant). In addition she gets 500 rubles pr month (additional cash grant) for the first child (assuming that it is older than 12 months). This amounts to a total of 4000 rubles per month plus the lump-sum. In comparison, an employed woman with average salary will get a lump-sum of 7000 rubles, 40% of the average salary, which is about 2800 rubles, and 500 rubles of additional cash grant per child. This adds up to 3800 rubles per month plus the lump-sum. An employed woman with the salary over 41000 rubles will get a lump-sum of 7000 rubles, in addition to 40% of her salary (not more that 16125 rubles) and 500 rubles of additional cash grant per child, which is 17125 rubles.



As pointed out above, one implication of the current system is that employed mothers with incomes below average (45% of the employed according to Gimpelson 2007), get less support than the non-employed mothers. Women with low incomes are also in a disadvantaged position compared to the situation for this group in earlier years, when everyone got the same amount, which of course was relatively higher the lower the income.

Today, lone mother (almost 27% of the sample in my research) will get only 800 rubles beyond to the common subsidies per month.

Finally, a special support of 250000 rubles to those who have had a second or higher-order child (so-called ‘maternal capital’) was introduced in 2006. This amount is earmarked for:

- purchasing of property (from three years after the birth of the child)
  
- the higher education of the child
  
- the provision of mothers pension

One should note, however, that the average price for 1 square meter in Moscow currently is 4000 USD (100000 rubles). Thus, the amount is only enough to increase the size of the housing by 25 square meters. In contrast to this, the amount corresponds to the price of about 1000 square meters in small towns and villages. One may therefore say that this policy in particular encourages childbearing in poor regions. Further, it may seem unnecessary to have 250000 rubles available for higher education, which is mostly free in Russia. Saving money for such purposes, or for even later use as old age pension, is also risky because of the possibility of high inflation.

*Table 3. The basic kinds of grants to families with children in Soviet Union and Russian Federation (from Rybakovskiy L., 2006 and State Statistics Organization of Russian Federation)*

Type of the grant of payment	1981	1995	2006
<b>1. Maternity and birth benefit</b>			
Lump-sum at a birth of the child	1chd – 50 rubles(30% of the average salary) 2chd – 100 rubles	102500 rubles (app.112% of the average salary)	7000 rubles (app. 100% of the average salary)
Subsidies for women for the first year of maternity-leave	35 rubles (that is 20% of the average salary)	35000 rubles (that is 38% of the average salary)	40% of salary, not more than 16 125 rubles (applies only to employed women)
Monthly cash-grant for the child to non-employed women	12 rubles (that is 6,7% of the average salary)	25000 rubles (that is 27% of the average salary)	1500 rubles (that is 21% of the average salary) for the 1 <sup>st</sup> child, 3000 rubles for the second and more 500 rubles (that is 7% of the average salary) Not more than 6000 rubles
Monthly cash-grant for the child to employed women	12 rubles (6,7% of the average salary)	25000 rubles (that is 27% of the average salary)	500 rubles (that is 7% of the average salary)
Taxes for issuelessness	6% of the salary		

---

## 4. Data and methods

### 4.1. Data

The data were taken from the Russia Longitudinal Monitoring Surveys (RLMS), which can be downloaded from the Carolina Population Center at the University of North Carolina. The RLMS is a nationally representative household and individual survey designed primarily to measure the effects of Russian reforms on the health and economic well-being of the population. However, it also includes some information on demographic behavior because of its relevance for people's health and the current and future economy. The survey has been held every year between 1992 and 2005, but in this analysis only the data from 2003 were used.

The 2003 round of the survey included 12856 individuals. 1466 of these were women of age 15-55 with at least 1 child, and these were included in the analysis. The focus was on how some economic and other factors measured at interview (see details below) are linked to the desire for having an additional child. An alternative might have been to analyse actual fertility in past years, but this would be problematic because the situation at interview could be a consequence of fertility rather than a determinant.

### 4.2. Statistical model

I estimated logistic regression models to see how various factors affect the probability of wanting another child. Binary responses, such as want vs. do not want at least one more child, arise in many fields of study. Logistic regression analysis is often used to investigate the relationship between these discrete responses and a set of explanatory variables.

Mathematically, the model is:

$$\text{logit}(p_i) = \ln \left( \frac{p_i}{1 - p_i} \right) = \beta_0 + \beta_1 x_{1,i} + \cdots + \beta_k x_{k,i}.$$

---

where  $p_i$  is the probability that woman  $i$  wants another child,  $x_{1,i}$ - $x_{k,i}$  are  $k$  independent variables and the  $\beta$ s represent the effects of these variables.

If the estimated beta is negative for, say, high-school graduates compared to those with lower education (a reference category), it means that women with a high school diploma less often want another child than those with lower education. As an example, consider an estimated beta of  $-0.35$ . This means that  $\ln(p/1-p)$  is reduced by  $-0.35$ , which means that  $p/(1-p)$  is reduced by 29.5% ( $1-\exp(-0.35)=0.295$ ). At very small levels of  $p$ , also  $p$  will be reduced by approximately 29.5%; at higher levels, it is not quite as simple. (Put differently, the exact reduction depends on  $p$ , which has the implication that it is also determined by the level of the other variables.)

These logit regression models are estimated in the SAS software, using the maximum likelihood method.

### 4.3 Variables

The woman's educational level is included as a two-level variable. I only make a distinction between those who have a high school diploma (more than 14 years of schooling) and those without. Education is linked to a number of factors that may affect childbearing desires. In particular, women with high education tend to have high wages. That means that they lose more income than the less educated per time-unit out of the labour market to care for a child. On the other hand, they may want to return earlier because of this, and some of them may have a flexible job that also makes an early return easier. It is possible that education affects fertility desires also through the preferences, or that the better educated feel more free not to abide by any norms about having at least two children. There is little knowledge about the former, but some support for the latter (Lesthaeghe and Surkyn 1988). The better-educated women are less likely to be married than the less educated (a situation that may be about to change, according to Oppenheimer 1994), but those who *are* married, tend to have better-educated husbands, though the implication of that for fertility desires is unclear. Unfortunately, the inclusion of education

in models for second or higher-order births involves certain selection problems. I return to that below.

Another variable included in the model is the total monthly income of the family at the time of interview. It is divided into 3 groups. The first group consists of those families whose monthly income is less than 5000 rubles. If there are two adults in the family in addition to at least one child, this means that the family is below or close to the poverty level (see definition above), though the situation is better during the first year because of the welfare benefit (typically about 3000 rubles per month). The second group consists of those with an income of 5000-10000 rubles, and the third consists of those with an income of more than 10000 rubles. There is a special category for those who did not report the family income. Unfortunately, there is no information on how much each of the partners (if the woman is married or cohabitant) contributes to this income. Therefore, an additional set of models is estimated separately for employed and non-employed women.

It is possible that the family income reported in the survey does not include activity from the 'black labor market', which is large in Russia. In addition, incomes may change substantially from year to year, so that the level shortly before interview is not very representative of earlier incomes or what the family expects to earn in the coming years. I therefore consider also three indicators of long-term incomes in the analysis: whether the family owns another separate apartment, whether they own a car, and whether they own a dacha (vacation house). Certainly, such ownership does not only reflect the person's or couple's own earnings, but also the resources in the larger family. However, one may perhaps rely on these resources also to cover child expenses, or the property may be sold or rented out. As should be obvious from the earlier discussion, the importance of such sources of income or support for the childbearing desires cannot be predicted, but there is at least no opportunity costs involved. To the extent that the ownership of these goods signals the couple's own labour incomes however, the opportunity cost argument is again relevant. For example, an apartment may have been bought because the woman has a high income (while the man perhaps has a rather low income), and this high income for the woman means that there are large opportunity costs of childbearing.

---

I also consider the woman's employment status at interview, grouped into five categories: those who are employed, those who are on maternity-leave, those who are on another kind of paid leave (as disablement pensions, for example), those who are on unpaid leave, and those who are not employed. The latter include some who do not want to work and some who would like to work but cannot find work (i.e. unemployed). In the regression models, those on leave are pooled together because the groups are small.

Unfortunately, it is not obvious what a measure of current employment captures, and therefore it is very difficult to interpret a statistical relationship between woman's employment and fertility (desires) (For an early discussion of this, see e.g. Lehrer and Nerlove 1986). To see the problem, consider one woman with a little child who works and one who doesn't. Perhaps the latter does not consider paid work an option, regardless of childbearing. In that case, there would be no opportunity costs involved in having another child, which suggest that she would be particularly likely to want another child (though this effect may be set off against the lower family income, to the extent that there is such an income effect). On the other hand, it is also possible that she does consider work an option, just as much as the other woman, but that she has not been able to find adequate child care. Assuming that they both take opportunity costs into account in their decision-making, the latter may expect the largest opportunity costs, because she at least after the previous birth has had most problems combining work and child care, which may be a good indication of what is likely to happen in case of later births as well. Thus, she would *not* be particularly likely to want another child, unless her loss of income after a subsequent birth is completely compensated by support from the state. This pattern was described in a recent analysis by Sinyavskaya, Ibragimova, Kartseva and Zakharov (2007).

One should also take the woman's age at interview (or at last previous birth) into account. In addition to being a determinant of the income, age has a strong effect on fertility. Obviously, there is a supply-side argument: After about age 35, there is a diminished ovarian reserve and an increase in chromosomal abnormalities in any fertilized embryos. Menopause occurs on average at about age 41 (Tarlatis and Zepidis 2003). However, age may also affect the fertility desires, which is the component in focus of this analysis. In particular, those who are relatively old may feel they do not have the energy to

take care of another child or be afraid that the child may not be healthy. (Childless women who are rather young may consider themselves too immature, or they may be eager to continue education, gain more work experience or enjoy a leisure time without children before embarking on parenthood, but such arguments would be less relevant when they have already become mothers.) In this analysis, age is included as a grouped variable.

Also the number of children and age of the youngest child are potentially important control variables. For example, having many children or young children may be the reason why the woman doesn't work, and it may also affect the father's income. At the same time, it affects fertility desires for obvious reasons.

Finally, it is important to make a distinction between those who live in a partnership, whether a marriage or an informal union, and those who are single. Most of the analysis is restricted to those who have a partner.

## 5. Results

### 5.1. Introductory description

Table 4 shows the number of women in each of the categories of each of the independent variables, as well as the proportions of these women who want another child

**Table 4. Number of women and proportions in different categories and proportions wanting a second child. All women.**

	<i>Number of women and proportions</i>	<i>%wanting second child</i>
<u>Age of woman</u>		
<20	15(1%)	60%
20-24	178(12%)	61%
25-29	321(22%)	53%
30-34	370(25%)	32%
35-39	328(22%)	12%
Over40	254(17%)	5%
<u>Number of children</u>		
1 child	919(63%)	46%
2 children	454(31%)	8%
3 or more children	93(6%)	5%
<u>Age of the youngest child</u>		
0-1	168(11%)	47%
2-4	318(22%)	41%
5-7	242(16%)	41%
8-10	248(17%)	34%
Over11	490(33%)	14%



**Table 4. Continued**

	<i>Number of women and proportions</i>	<i>%wanting second child</i>
<u>Family Income</u>		
<i>Less than 5000</i>	<i>427(29%)</i>	<i>26%</i>
<i>5000-10000</i>	<i>505(34%)</i>	<i>31%</i>
<i>More than 10000</i>	<i>444(30%)</i>	<i>37%</i>
<i>Missing value</i>	<i>90(6%)</i>	<i>36%</i>
<u>High school diploma</u>		
<i>No</i>		
<i>Yes</i>	<i>1257(86%)</i>	<i>31%</i>
<u>Employment</u>		
<i>Employed</i>	<i>996(68%)</i>	<i>29%</i>
<i>On maternity leave</i>	<i>99(7%)</i>	<i>43%</i>
<i>On another kind of paid leave</i>	<i>7(0,5%)</i>	<i>43%</i>
<i>On unpaid leave</i>	<i>5(0,3%)</i>	<i>20%</i>
<i>Non-employed</i>	<i>359(24%)</i>	<i>34%</i>
<u>Car</u>		
<i>No</i>		
<i>Yes</i>	<i>552(37%)</i>	<i>33%</i>
<u>Dacha</u>		
<i>No</i>		
<i>Yes</i>	<i>253(17%)</i>	<i>32%</i>
<u>Another apartment</u>		
<i>No</i>		
<i>Yes</i>	<i>101(7%)</i>	<i>44%</i>
<u>Married or cohabiting</u>		
<i>No</i>		
<i>Yes</i>	<i>1186(81%)</i>	<i>34%</i>

As one would expect, the desire for an additional child is weakest among women who are not married or cohabiting, who are rather old, who already have more than one child, or whose youngest child is rather old. Further, there are some differences according to education, work, family income, and property ownership. In particular, it is worth noting that the proportion wanting another child is highest among those with the highest family income.

In table 5, the corresponding numbers are shown for women with a partner (81% of the sample). They are very similar.

**Table 5. Number of women and proportions in different categories and proportions wanting a second child. Married and cohabiting women.**

	<i>Number of women and proportions %wanting second child</i>	
<u>Age of woman</u>		
<20	15(1%)	60%
20-24	148(12%)	66%
25-29	265(22%)	57%
30-34	298(25%)	33%
35-39	256(21%)	13%
Over40	204(17%)	5%
<u>Number of children</u>		
1 child	722(61%)	51%
2 children	381(32%)	8%
3 or more children	83(7%)	6%
<u>Age of the youngest child</u>		
0-1	154(13%)	48%
2-4	265(22%)	43%
5-7	207(17%)	43%
8-10	189(16%)	36%
Over11	371(31%)	15%

**Table 5. Continued**

	<i>Number of women and proportions %wanting second child</i>	
<u>Family Income</u>		
<i>Less than 5000</i>	<i>307(26%)</i>	<i>28%</i>
<i>5000-10000</i>	<i>406(34%)</i>	<i>32%</i>
<i>More than 10000</i>	<i>391(33%)</i>	<i>39%</i>
<i>Missing value</i>	<i>11(5%)</i>	<i>45%</i>
<u>High school diploma</u>		
<i>No</i>		
<i>Yes</i>	<i>1019(86%)</i>	<i>33%</i>
<u>Employment</u>		
<i>Employed</i>	<i>784(66%)</i>	<i>31%</i>
<i>On maternity leave</i>	<i>94(8%)</i>	<i>45%</i>
<i>On another kind of paid leave</i>	<i>7(0,6%)</i>	<i>43%</i>
<i>On unpaid leave</i>	<i>5(0,4%)</i>	<i>20%</i>
<i>Non-employed</i>	<i>296(25%)</i>	<i>39%</i>
<u>Car</u>		
<i>No</i>		
<i>Yes</i>	<i>513(43%)</i>	<i>34%</i>
<u>Dacha</u>		
<i>No</i>		
<i>Yes</i>	<i>214(18%)</i>	<i>33%</i>
<u>Another apartment</u>		
<i>No</i>		
<i>Yes</i>	<i>81(7%)</i>	<i>46%</i>

## 5.2. Regression models

Estimates from a model for the entire sample are shown in table 6. As expected, the probability of wanting another child increases with the woman's age (up to 24) and then declines. It also decreases with the number of children, and it is particularly low for those who are neither married nor cohabiting. However, there is no clear effect of the age of the youngest child (as opposed to what was indicated in tables 4 and 5, which show gross relationships without control for other variables).

Interestingly, a significantly positive income effect appears, while there is no effect of being non-employed as opposed to being employed (there is a positive estimate for the small group of women on leave, but it is not significant) or of having high-school education rather than less education.

**Table 6. Effects on various socio-demographic variables on the log-odds of wanting another child. All women.**

	<i>Estimate (Standard error)</i>
<u>Age of woman</u>	
<20	-0,24(0,57)
20-24	0
25-29	-0,21(0,21)
30-34	-0,84(0,24)***
35-39	-1,85(0,30)***
Over40	-3,15(0,37)***
<u>Number of children</u>	
1 child	0
2 children	-1,90(0,20)***
3 or more children	-1,98(0,42)***

**Table 6. Continued**

	<i>Estimate (Standard error)</i>
<u><i>Age of the youngest child</i></u>	
<i>0-1</i>	<i>0,15(0,24)</i>
<i>2-4</i>	<i>0</i>
<i>5-7</i>	<i>0,30(0,21)</i>
<i>8-10</i>	<i>0,43(0,23)*</i>
<i>Over11</i>	<i>-0,19(0,26)</i>
<u><i>Family Income</i></u>	
<i>Less than 5000(reference group)</i>	<i>0</i>
<i>5000-10000</i>	<i>0,24(0,17)</i>
<i>More than 10000</i>	<i>0,50(0,17)***</i>
<i>Missing value</i>	<i>0,69(0,29)**</i>
<u><i>High school diploma</i></u>	
<i>No</i>	<i>0</i>
<i>Yes</i>	<i>0,15(0,19)</i>
<u><i>Employment</i></u>	
<i>Employed</i>	<i>0</i>
<i>“On leave”</i>	<i>0,37(0,28)</i>
<i>Non-employed</i>	<i>0,05(0,18)</i>
<u><i>Marital status</i></u>	
<i>Married or cohabiting</i>	<i>0,84(0,18)***</i>
<i>Neither married nor cohabiting</i>	<i>0</i>
***P<0,01, **p<0,05, *p<0,1	

The results are very similar when single women are left out (table 7). In these models, I also include ownership of car, dacha, and an additional apartment. These indicators of affluence are not significantly linked with the probability of wanting another child. Stimulating effects are only very weakly indicated.

**Table 7. Effects on various socio-demographic variables on the log-odds of wanting another child. Married or cohabiting women.**

	<i>Estimate (Standard error)</i>
<u>Age of woman</u>	
<20	-0,40(0,59)
20-24 (reference group)	0
25-29	-0,29(0,24)
30-34	-0,98(0,27)***
35-39	-1,92(0,34)***
Over40	-3,13(0,40)***
<u>Number of children</u>	
1 child(reference group)	0
2 children	-2,01(0,21)***
3 or more children	-1,94(0,42)***
<u>Age of the youngest child</u>	
0-1	0,05(0,27)
2-4(reference group)	0
5-7	0,27(0,23)
8-10	0,45(0,26)*
Over11	-0,29(0,29)
<u>Family Income</u>	
Less than 5000(reference group)	0
5000-10000	0,18(0,19)
More than 10000	0,43(0,20)**
Missing value	0,59(0,32)*
<u>High school diploma</u>	
No	0
Yes	0,08(0,21)

*Table 7. Continued*

	<i>Estimate (Standard error)</i>
<u>Employment</u>	
<i>Employed(reference group)</i>	<i>0</i>
<i>“On leave”</i>	<i>0,27(0,29)</i>
<i>Non-employed</i>	<i>-0,08(0,19)</i>
<u>Car</u>	
<i>No</i>	<i>0</i>
<i>Yes</i>	<i>0,16(0,16)</i>
<u>Dacha</u>	
<i>No</i>	<i>0</i>
<i>Yes</i>	<i>0,17(0,20)</i>
<u>Another apartment</u>	
<i>No</i>	<i>0</i>
<i>Yes</i>	<i>0,38(0,29)</i>

\*\*\* $P < 0,01$ , \*\* $p < 0,05$ , \* $p < 0,1$

The positive effect of family income suggests that having a spouse with high income increases the probability of wanting another child, which is indeed a noteworthy result. As explained earlier, it is not obvious what one should expect, since rich people would also tend to spend more on each child (have higher childbearing costs), and positive effects have rarely been seen in other studies. Perhaps my result reflects that the low-income group includes many people who are newly poor, i.e. who have incomes much below what they earned earlier, and which have formed their material aspirations. In this group, there may also be particularly much uncertainty about future earnings and strong fears about later periods with (temporarily) even lower incomes. Conversely, the richest group may include several who have recently become rich.

For working women, the family income also includes women's earnings. (Note that there may be variations in women's income even at a given level of education, which is included in the model). Higher earnings for women may depress subsequent fertility through higher expected opportunity costs under the assumption that a mother stays home some time to care for a child without full wage compensation (as in Russia). On the other hand, a woman with a high earning potential also contributes much to the family income once she returns to work, and given the positive income effect we have seen (very weakly supported by the positive effects of property ownership), this may increase fertility. Since there is at least more doubt about a positive effect of women's earnings than of men's earnings, one would expect to see a sharper positive effect of family income for the non-employed than for the employed. This is also weakly indicated when models are estimated separately for the two groups (table 8).

**Table 8 Effects on various socio-demographic variables on the log-odds of wanting another child, by employment status. Married or cohabiting women.**

	<i>Estimate (standard errors)</i>	
	<i>Model1</i> <i>(Employed)</i>	<i>Model2</i> <i>(Unemployed)</i>
<u><i>Age of woman</i></u>		
<20	-14,12(866)	-0,76(0,70)
20-24 ( <i>reference group</i> )	0	
25-29	-0,17(0,35)	-0,39(0,14)***
30-34	-0,76(0,38)**	-1,40(0,52)***
35-39	-1,89(0,45)***	-1,66(0,66)**
Over40	-3,26(0,51)***	-2,54(0,83)***



**Table 8. Continued**

	<i>Estimate (standard errors)</i>	
	<i>Model1</i> <i>(Employed)</i>	<i>Model2</i> <i>(Unemployed)</i>
<u><i>Number of children</i></u>		
<i>1 child(reference group)</i>	0	0
<i>2 children</i>	-1,86(0,27)***	-2,09(0,39)***
<i>3 or more children</i>	-2,33(0,76)***	-1,90(0,61)***
<u><i>Age of the youngest child</i></u>		
<i>0-1</i>	0,21(0,56)	-0,21(0,42)
<i>2-4 (reference group)</i>	0	0
<i>5-7</i>	0,39(0,29)	-0,00(0,43)
<i>8-10</i>	0,43(0,31)	0,38(0,56)
<i>Over11</i>	-0,17(0,34)	-0,90(0,65)
<u><i>Family Income</i></u>		
<i>Less than 5000(reference group)</i>	0	0
<i>5000-10000</i>	0,05(0,25)	0,27(0,39)
<i>More than 10000</i>	0,23(0,25)	0,47(0,40)
<i>Missing value</i>	0,78(0,44)*	0,47(0,40)
<u><i>High school diploma</i></u>		
<i>No</i>	0	0
<i>Yes</i>	0,09(0,20)	0,08(0,40)
<u><i>Car</i></u>		

---

<i>No</i>	<i>0</i>	<i>0</i>
<i>Yes</i>	<i>0,09(0,19)</i>	<i>0,25(0,32)</i>

**Table 8. Continued**

	<i>Estimate (standard errors)</i>	
	<i>Model1</i>	<i>Model2</i>
	<i>(Employed)</i>	<i>(Unemployed)</i>
<u><i>Dacha</i></u>		
<i>No</i>	<i>0</i>	<i>0</i>
<i>Yes</i>	<i>0,24(0,25)</i>	<i>0,28(0,44)</i>
<u><i>Another apartment</i></u>		
<i>No</i>	<i>0</i>	<i>0</i>
<i>Yes</i>	<i>0,64(0,36)</i>	<i>-0,48(0,58)</i>

\*\*\* $P < 0,01$ , \*\* $p < 0,05$ , \* $p < 0,1$

Unfortunately, it is difficult to conclude from the estimates whether women's earnings actually have a less positive effect than the spouse's earnings and perhaps even a negative one. In addition to the small difference between the two sets of estimates in table 8, the interpretation of the education effect is difficult. The lack of a significant effect may indeed signal that a high earning potential for women at least does not reduce fertility strongly, but it is also possible that there actually is such an effect but counteracted by other factors (although not the higher incomes of the spouses of better-educated women, which is controlled for in the model). In principle, it is always possible that the better-educated have stronger childbearing preferences, given childbearing costs and incomes, though there is no literature supporting this. More importantly, however, there is a selection problem.

To see the selection problem, let us focus on the probability that a one-child mother wants another birth. In my model, I include the age of the mother and age of the youngest child. In other words, I compare the fertility desires among better-educated at, say, age 24

who had their first child, say, 2 years earlier and lower-educated at age 24 who had their first child 2 years earlier. The former are a very select group, since the better-educated tend to have their first child much later. They may be very 'fertility prone'. Similarly, when we compare at a high age, the lower educated may be relatively uninterested in children compared to what is usual. Kravdal (2001b) has shown that, when models are estimated simultaneously for first and higher-order births, with a common unobserved factor, education effects tend to be much less positive. Put differently, education effects are biased upwards in separate analyses of second, third and higher-order births. It is possible that, if I had used a more advanced method, the education effect might have been more negative and supported the idea of a negative effect of women's earnings through opportunity costs (or possibly other factors).

The lack of effect of employment is in line with findings from other studies (Hoem and Hoem 1989; Kravdal 1992) and supports the idea that this factor may pick up counteracting effects of work orientation (the non-employed do not take opportunity costs into account, which contributes to high fertility) and work opportunity (the non-employed would indeed have liked to work, but cannot find adequate child care, which contributes to low fertility).

## **6. Conclusion**

Childbearing is costly in Russia, as in other developed countries. There are direct costs of for example clothes and food, as well as opportunity costs. The latter can in principle be low if there is a generous maternity leave system, and if it is easy to combine gainful work and childrearing after the maternity leave period, for example as a result of good access to high-quality day care (the cost of which are part of the direct costs). The Russian government has recently taken steps to reduce these costs of childbearing markedly, especially through a more generous maternity leave system and the 'maternal capital'. This makes good sense if one is concerned about the consequences of low fertility (or more precisely, if the benefits of higher fertility are thought to be large compared to what one

might have achieved if the resources put into the pronatalist policy instead had been used for other purposes). The childbearing costs are reduced more for some groups than for others, which has implications for the intra-national fertility differentials, but that is not necessarily a problem.

There has been much uncertainty among demographers about the importance of men's income, since those with higher purchasing power also typically will have higher childbearing costs. High earnings for women are even less likely to increase fertility. Indeed, it has traditionally been thought to depress fertility. However, a positive effect of family income has been estimated in the present study, which suggests that there is a fertility stimulating effect of men's incomes, and perhaps one that is not fully counteracted by a correspondingly depressing effect of women's earnings. The lack of negative education effect may also indicate that women's wages are not strongly and negatively related to fertility (which perhaps was the case especially some years ago in the western countries where the economic-demographic theories originated), though there is a possibility of an upward selection bias in the estimate. Thus, if the positive economic development in Russia continues, so that incomes of (potential) parents increase, fertility may go up anyway, regardless of attempts to subsidize childbearing. One should not necessarily expect fertility to keep increasing indefinitely in step with a long-term economic growth, eventually reaching perhaps far beyond the replacement level. More plausibly, we may see an increase for some years if fewer experience the uncertainty about the future and the feeling of deprivation compared to earlier years that may currently be especially common in the poorest segments of the population.

Finally, it should be noted that fertility may increase also without policies attempting to subsidizing childbearing costs or increases in incomes. Social norms or individual preferences may change, and politicians might even try to stimulate such a change through campaigns in which the individual pleasures of childrearing are pointed out and perhaps also the broader societal value is mentioned (as done in for example Singapore). That also has its price, however, and one cannot know whether the result will be particularly good compared to the amount spent.

## References

Avdeev, A., Monnier, A. 1996. *Mouvement de la population de la Russie: 1959-1994*. INED.

on line [<http://www-census.ined.fr/demogrus/Demographie/Population/composan.htm>]

Becker, G. 1991. *A treatise on the family*. Harvard University Press, Harvard.

Bridger, S. and Kay, R. 1996. *Gender and generation in the new Russian labour market*. In H. Pilkington (Ed.). *Gender, Generation and Identity in Contemporary Russia*, pp. 21–38. Routledge, London.

Cleland and von Ginneken. 1988. *Maternal education and child survival in developing countries*. *Social Science and Medicine*, 27(12):1357-68.

Easterlin, R.A. and Crimmins E.M. 1987. *The fertility revolution A supply-demand analysis*. University of Chicago Press, Chicago.

Evans, M. and Kelley, J. 2001. *Employment for mothers of pre-school children: Evidence from Australia and 23 other nations*. *People and Place*, Vol. 9, no. 3, pp.28-40.

Russian Federal law 2005

Gimpelson, V. 2007. *Problems of the labor market*.

Hoem, B., Hoem, J. M. 1989. *The impact of women's employment on second and third births in modern Sweden*. *Population Studies* 43: 47-67.

---

Kapeluskinikov, A. 2008. *Russia's Labor Market Model: What's Ahead?*. Redaktsiya zhurnala "Voprosy Ekonomiki".

Karkhova, E. and Andreev, V. 2000. *Did the Economic Crisis Cause the Fertility Decline in Russia: Evidence from the 1994 Micro census: European Journal of Populatio*,: p 211-233

Kohler, H. P. and Kohler, I. 2002. *Fertility decline in Russia in the early and mid 1990s: the role of economic uncertainty and labour market crises*. European Journal of Population/v18/number3/p233-262

Kravdal, Ø. 1992. *The weak impact of female labour force participation on Norwegian third-birth rates*. European Journal of Population 8 (3) : 247-263.

Kravdal, Ø. 2001a. *Paper on unemployment*. Demographic Research\_ 5  
online at [www.demographic-research.org/ Volumes/Vol5](http://www.demographic-research.org/Volumes/Vol5)

Kravdal, Ø. 2001b. *The high fertility of college educated women in Norway: An artefact of the separate modelling of each parity transition*. Demographic Research\_ 5: 187-21  
online at [www.demographic-research.org/ Volumes/Vol5/6](http://www.demographic-research.org/Volumes/Vol5/6)).

Lehrer, E. and M. Nerlove. 1986. *Female labor force behavior and fertility in the United States*. Annual Review of Sociology 12: 181-204.

Lesthaeghe, R, Surkyn, J. 1988. *Cultural dynamics and economic theories of fertility change*. Population and Development Review 14: 1-45.

Lubyova, M. and Sabirianova, K. Z. 2001. *Returns the human capital under economic transitions: the cases of Russia and Slovakia*. Ekonomicky Casopis 49, 630–662. Oppenheimer 1994.

Muzynska, M. 2006. *Woman's employment and union disruption in a changing socioeconomic context: the case of Russia.*

Ogloblin, C. G. 1999. *The gender earnings differential in the Russian transition economy.* Industrial and Labour Relations Reviewed 52, p.602–627.

Putin, V. 2006. *On raising Russia's birth rate.* Population and Development Review. 32(2):385-389.

Rose, R. and McAllister, I. 1996. *Is money the measure of welfare in Russia?* Review of Income and Wealth 42, 75–90.

Rybakovskij, L.2001. *The Second World War: Reduction of population in Russia.*

Scherbov, S. and van Vianen, H. 2004. *Marriage in Russia: a reconstruction.* Demographic Research 10, 28–60.

Schultz, T.P. 1997. *The Demand for Children in Low-Income Countries.* Handbook of Population and Family Economics, Vol 1A, Chap. 8 (eds.) M.R. Rosenzweig and O Stark, Amsterdam: North Holland Pub. Co.

Sinyavskaya, O., Kartseva, M., Zakharov, S., Ibragimova, D. 2007. *Family strategies, labour market, behaviour and fertility in modern Russia.*

Spielauer, M.; Koytcheva, E.; Kostova, D.2007. *First and second births in first and second unions: a decomposition of fertility decline in Bulgaria and Russia since the 1989 economic and political transition.* Rostock, MPIDR Working Paper WP-2007-001.

State Statistics Organization 2002: The Year Report 2002.