Declining Second Birth Rates in a Country in Transition: Differences by Level of Education and Ethnic Group in Bulgaria

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For more than a decade substantial changes in the fertility trends are observed in Bulgaria. There is a tremendous drop in the birth numbers and the total fertility level stays well below the replacement level since year 1989. At the moment Bulgaria belongs to a group of countries with lowest-low fertility (Kohler, Billari and Ortega 2002). The traditional behavior patterns observed in the socialist period are now fading away and give place to new developments. Prevailing patterns such as the two-child family model, an early age at first marriage and birth, a short interval between births are replaced by a delay in marriage and childbearing, a break of the two-child family model, and a rise in the out-of-wedlock births (Philipov 2001).

According to recent investigations on the fertility problems in Bulgaria, almost 90% of the women get a child. That is, the first child is still universal. The drop of the fertility is mainly due to the drop of the higher order births (Philipov and Kohler (2001). The observed second order TFR in year 1998 is already 0.37, compared to 0.70 in 1989. Philipov (2001) observes a widening of the intervals between the first and second births in Bulgaria for the last decade. Thus, there is a delay in the first births, as well as a delay in the second births, relative to the first one. In the context of extremely low fertility rates, the decision for a second child is influenced much stronger than ever by factors on micro and macro level, which determine the decision for or against a bigger family. More women nowadays in Bulgaria stop childbearing after the birth of the first child. That is, we expect that those women who get a second child are a selected group and should have certain common characteristics.

The aim of this paper is to investigate which women are more prone to get a second child nowadays in Bulgaria. The main characteristics that we take into account are the current educational level of the women and the ethnic group to which they belong.

The effect of these personal characteristics will be compared for two main periods: the decade before the fall of the Berlin wall and the decade after. Such a distinction will enable us to capture the impact of the different social and economic situation in the country and will contribute to a better description of the drop in the second births. We will make a distinction between the age at birth of first child, the year of birth of the first child, and the marital status at the time of first birth when we study the second birth. The study will include also a cohort perspective on the transition to second birth.

The question of the second child has received much but not sufficient attention in the scientific literature. The second-birth intensities are very specific for each country and depend on different local factors such as family and social policy, economic situation and so on. Having a second child differs substantially from having a child and the decision for a second birth relays stronger on the specific country and family situation. Women, who have a child, are already a selected group and proceeding to another birth implies different decisions from the one for first birth.

Some empirical evidences, for instance, for the Scandinavian countries, show that the correlation between the educational attainment of the woman and the transition to second birth is a positive one (Hoem/Hoem 1989, Kravdal 1992). The possible explanation for this correlation can be that if childbearing and employment is compatible, the highly educated women earn higher wages and have the economic resources to support a larger family (Kreyenfeld 2001). Olah (2001) presents a comparison for the second birth intensity between Sweden and Hungary. She also finds a positive relation between the education and the risk for second births in Sweden. However, the results for Hungary are different – no significantly different propensity for a second child was found for women with high education and with primary schooling. The suggestion is that this is linked to policy measures, which counterbalance the greater fertility costs for the more educated women in Hungary.

A positive relation between education and second childbearing is also found in West Germany (Huinink 1989). His explanation is that women who are at risk of having a second child are a selected group, because they have given already a birth to a first child. Kreyenfeld (2002) introduces three main hypotheses for explaining this phenomenon in West Germany. The results show that the partner's educational attainment plays a significant role in the transition to second birth and when

controlling for unobserved heterogeneity factors, the impact on women's college education turns from positive to negative.

Kohlmann and Zuev (2001) find that in case of Russia, "being married, unemployed, better off economically, and being satisfied with life leads to a higher probability of intending a second birth". Their suggestion is that women, who possess enough economic resources (due to the income of their partners) and are not gainfully employed, invest instead in giving birth to additional children.

The transition to second birth is one of the transitions that influence at most the fertility levels in the countries. Thus, studying the second births will contribute substantially to understanding the drop in fertility trends. Unfortunately, this question lacks attention for the Bulgarian case. The decline in the second births observed at the moment is a new phenomenon and needs still to be investigated.

We have already performed a research on first births and found out that the educational level didn't play any substantial role for the first birth intensities for the period before year 1989 (Koytcheva, 2003). The effects of the educational level appear only after the start of the transition of the country towards a market economy – women with the highest education have the lowest propensity of getting a child. Also, people from the Bulgarian ethnic group have the lowest intensities for first birth, compared to all the other ethnic groups.

Our hypothesis is that, in the case of second child in Bulgaria, women with high education have a lower risk of second birth. Our expectation derives from micro-economic fertility theory which proposes that highly educated women have increased opportunity costs of childbearing, which are a result of the low public support and the collapse of the pronatalistic policy in the country. We expect that the differencial impact of the educational levels on the risk of second birth appeared only after year 1989, as is the case with the first births.

There are three main ethnic groups in Bulgaria: Bulgarians (84% of the population), Turks (9%) and Romany (5%). These groups differ strongly in their culture, religion and traditions. And, of course, there are also differences in their demographic behaviour. The Romany group has the highest intensity for first births (Philipov 2001) and we expect that it has the highest intensity to second birth as well, while the Bulgarians have the lowest. We suppose that the differences between the ethnic groups for the second-birth intensities existed also during the totalitarian period in the country, but were not so strong.

The data, that will be used for the analysis comes from a sample survey "Study of Natality and Reproductive Behavior". This survey was a part of the Census program, and was conducted parallel with the Population Census in March 2001 in Bulgaria. The sample size is 11 000 respondents and includes women aged 15-49 and men aged 15-59. We link the data from the survey with that of the Census in order to obtain richer information on each respondent. As a result of the linkage of the two data sets we acquire information on the birth histories of the women, educational histories and marital histories of all the respondents, as well as rich information on individual characteristics (ethnicity, religiosity, number of siblings, place of residence up to age 15).

Our study of the transition to second birth will use hazard regression models. This will enable us to introduce into the model various time-varying and non-varying explanatory covariates on which the event could be conditioned. All the modeling and computational process will be done using the software package aML, version 2.02, created by Lillard and Panis (2003). Although in our analysis we want to stress only on the transition to second birth, we will include in our model simultaneous transition for first and second births in order to deal with the effect of selectivity into parenthood.

Our preliminary results show that women with lowest education have the highest risk for second birth and that the more time passes since the first birth, the lower the intensity for a second one is. Also, there is a drop in the second birth risk in all the ethnic groups, but the highest one is for the Bulgarians. The Romany group stays with the highest risk of getting a second child at all ages.

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