After the first child: Job stability and having another child

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Note: This is an extended abstract of a paper that is well along its way to being finished. Rather than cut the text to fit the usual 2-4 page length, we left it a bit lengthier so that reviewers may better assess our study.

Extended Abstract:

With the global recession, labor markets are increasingly unstable, creating higher job turnover and increasing unemployment rates. These labor market characteristics can be found in various national contexts and, as such, they are mediated by various policy regimes. Women who become mothers under these conditions may face more complicated decisions about how to divide their time in paid and unpaid work. The cost of not participating in the labor force may be so high that paid work becomes a necessity and childbearing is postponed or foregone. However, whether family policies favor women stepping out of the labor force to provide care or rather enrolling their children in child care may become particularly important during difficult economic times. For example, Vikat (2004) did not find that the economic crisis of the 1990s in Finland led to changes in fertility patterns. Among other reasons, he argued that the Finnish welfare state lessened the impact of job income loss and provided incentives for women to take time off of work at a time when career advancement was unlikely (p. 204). Family policies supported the dual-earner family but provided long leave periods with high levels of allowances, which supported women staying home and out of the labor market, as well as a high level of daycare provision.

In contrast, the economic crises in the same time period in the post-communist countries were accompanied by either substantial postponement or stopping behavior (Sobotka 2004; Billingsley 2009). These divergent outcomes invite questions regarding how women navigate labor market decisions when they are in the childbearing stage of their lives and when, simultaneously, there is economic recession. On the one hand, we may expect women to delay childbearing when there is economic uncertainty (Kohler, Billari and Ortega 2004) or even forego family expansion completely as in the time of the Great Depression (Myrdal & Myrdal, 1934 in Gustafsson, 2002). Direct and indirect costs of childbearing (Becker 1981) may also be important; while economic crisis may amplify the direct costs of childbearing, the loss of employment also implies diminishing opportunity costs, which may have previously deterred childbearing. Therefore, theories predict both an increase and a decrease in fertility in a context of economic crisis.

The case of Russia provides an opportunity to study the dynamics surrounding labor market and childbearing decisions during difficult economic times. After the dissolution of the Soviet Union, tremendous economic upheaval in Russia generated conditions of increasing unemployment and job instability (Blanchard 1997; Barr 2001). Figure 1 displays the dramatic increase in job loss over the 1990s and early 2000s in Russia. Although registered unemployment remained low, the

share of the active population that was unemployed according to the ILO definition more than doubled by 1998 and still remained higher in 2007 than in 1992. Therefore, Russia is a highly appropriate context in which we may investigate the childbearing trajectories of women who have a turbulent relationship with the labor market, especially during times of rapid social change.

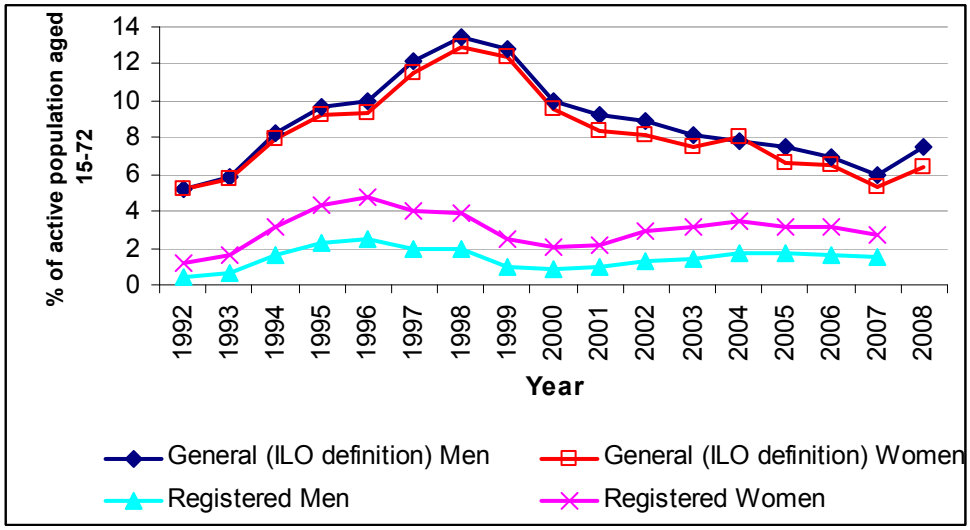

Fig.1 Rates of general (by ILO definition) and registered unemployment in Russia

Sources: official Russian Statistical Agency (Goskomstat; from 2005 – Rosstat) data

The most notable shift in Russian fertility trends after the transition from communism began was a decrease in second births during this tumultuous time (Sobotka 2002). Past research (Billingsley 2009) has shown that women who had ever experienced unemployment during the 1990s and early 2000s had less than half the risk of having a second birth than women who had not experienced unemployment. This finding suggests that the difficult economic context during the transition from communism was related to the fertility decline in Russia.

However, this relationship may not be straightforward, rendering such a conclusion possibly premature. For example, we might expect that many women who lose their jobs or cannot find paid work after having their first child may just opt out of the labor force and devote their time to childrearing. If so, women who claim unemployment rather than claiming inactivity after having their first child may be a highly selective group of women that are particularly oriented toward participating in the labor force and may be less likely to have wanted a second child anyhow.

One manner in which we may better understand the relationship between unemployment and lower second birth risks is to decompose the timing and order of events according to when the spell of unemployment occurred. Retrospective employment and fertility histories allow event history models of the impact of unemployment on second birth risks according to the timing. The context surrounding the first birth and what happened afterward may as well offer evidence that allows for a more accurate understanding of women's experiences in difficult labor market conditions during their childbearing career. As such, this paper also poses multiple explanations

for the relationship between unemployment and low second birth risks and uses descriptive information from multiple sources to assess their validity.

The next part of this paper presents the data and findings of an analysis on the impact of unemployment on second birth risks, according to the timing of when it occurs. We find that *when* unemployment is experienced does indeed matter. If unemployment occurs before the first child is born, it does not impact whether a second child is born. However, if women experience unemployment after having a first birth, this experience intensely suppresses their willingness to have a second birth. The following sections attempt to disentangle the possible causes for this relationship and identify the most fitting interpretation. These descriptive analyses offer supporting evidence for some explanations and rule out the likelihood of others.

DATA

The data used in this study are part of a larger Generations and Gender Program designed as "a system of national Generations and Gender Surveys (GGS) and contextual databases, which aims at improving the knowledge base for policy-making in UNECE countries. The GGS is a panel survey of a nationally representative sample of 18-79 year-old resident population in each participating country with at least three panel waves and an interval of three years between each wave. The contextual databases are designed to complement micro-level survey data with macro-level information on policies and aggregate indicators" (UNECE, 2006). Two waves of the Russian GGS are used (2004 and 2007). In the first wave (11,261 respondents that are 18-79 years old), the response rate was particularly low in the urban areas of St. Petersburg and Moscow (around 15%), but was 57% in all other areas (Independent Institute for Social Policy 2004).[1] The average sample attrition between two waves was 31% (panel sample – 7786 obs.) but again it was unequally distributed across different settlements. In Moscow 56% of 2004 sample was lost by 2007, in St. Petersburg 53% was lost, in other regional centers – 37%, while in rural area the sample attrition was only 15%.

Additionally, the Employment and Education Survey (EES) was used to study employment histories. It is based on a 2004 Russian Generations and Gender Survey (GGS) sub-sample of 18-55 year old men and women. It covers all employment and educational activity over the life of the respondent, starting from January of the year he or she turned 17. The response rate for this survey was 86%.[2] Other information covered in this retrospective survey are children born, non-work activities—such as parental leave and retirement—and migration histories.

The dependent variable of the second birth event is constructed as a binary dummy: 0=no second birth, 1=second birth. Both men and women are analyzed separately in order to shed additional light on relationships that emerge. For instance, the meaning of a relationship may become clearer if the relationship is experienced by both men and women since some explanations are

[1] The model will include a dummy variable to capture whether the survey took place in either St. Petersburg or Moscow, which should account for any bias introduced by this low response rate. Because the results section presents mostly truncated results, it is important to note that in no case was the St. Petersburg/Moscow dummy variable statistically significant.

[2] For information about the technical aspects of this survey and its sample, see: Independent Institute for Social Policy (2005): Education and Employment Survey on Russia - Technical Report, Moscow.

only applicable to women. The respondents are censored eight months before their second birth, to account for a gestation period, or at the time of the interview, if they had not had a second child.[3]

A piecewise constant event history model is estimated to achieve the relative risks of a second birth, according to different model specifications. Using a piecewise model allows the baseline hazard to vary according to pre-determined time segments, since we would expect the hazard rate to differ over time. A second child is more likely to follow the first in the first few years rather than many years later. Therefore, the baseline hazard rate is specified to vary in the time up to one year after the first birth, between the second and third year, etc., until the fifth year after the first birth, in which the baseline hazard becomes constant.

This analysis covers the time period between the first and second births only (or at time of censoring), but the time period preceding the first birth may also offer important information. For example, an individual may experience unemployment before having a first child, decide to have a first child anyways because it is universal behavior, but not have a second child due to uncertainty that developed during past experiences. Therefore, information about unemployment occurrences before the first birth is kept as a memory, in order to assess whether they have their own impact. *A priori*, we expect that experiencing unemployment lowers the relative risk of having a second birth, regardless of whether it occurs before or after the birth.

Time-Constant Covariates

St. Petersburg and Moscow dummy: Because the response rate was so low in these two cities, a dummy for where the survey took place is introduced into the model to capture any bias this may cause. 8% of this sample was surveyed in St. Petersburg or Moscow.

Siblings: The number of siblings is included as a categorical variable: only child, 1 sibling, 2 siblings, 3 + siblings, and unknown/missing.

Birth residence: This variable captures the impact of being born in an urban or rural environment, but not the impact of this environment at the time of the survey or childbearing. Specifically, the coding collapses regional centers, other cities and urban-type communities into "urban" and countryside as "rural".

Age at first birth: This variable is continuous and simply introduces how many years old the respondent was when he/she had the first child.

Time-Varying Covariates

Union status: Respondents are classified as being either single or in a cohabiting union, including marriage. The majority of person/time units in which the respondent already had one child were spent in unions.

[3] Since EES data only record histories from January of the year in which the respondent turns 17, all information recorded in the months before the respondent turns 17 are censored. Eliminating those respondents who had their first child before the explanatory variables can be introduced excludes 118 men and women, 81 of which conceived in the 16th year. 17 more respondents were excluded because they did not know the year of their first birth.

Time since first birth: Because the impact of time since the first child was born is not likely to be constant, respondents pass through categories of time: 0-1 years, 1-2, 2-3, 3-4, 4-5 and 5 years or more since the first child was born.

Educational status and level: Education enrollment status and level are combined into one variable in which respondents' spells are coded as being in education and being out of education, which then takes three possibilities: low, middle, and high education.

Labor force status and occupational class: Labor force status and occupational class includes the categories unemployed, SeC1 (manual workers), SeC2 (low-grade workers), SeC3 (intermediate employees), SeC4 (salariat), and not participating in the labor force (NLFP). NLFP includes such categories as women and men still in education, in the military, as well as those who choose not to participate in the labor force for other reasons such as caring for a child.

Ever experienced unemployment: Spells are coded according to whether the respondent has ever experienced unemployment, therefore this is a time varying covariate, but with variation only occurring once: respondents are coded as never having experienced unemployment until unemployment occurs, then forever after as having experienced unemployment. Unemployment is counted if it occurred before the first birth and, thus, before the respondent was at risk for a second birth. However, the timing of the occurrence is separated in the model.

The unemployment measures was constructed as "ever experienced" since losing one's footing in the labor market may have long-lasting effects on feelings of security. This specification strategy runs the risk of weakening the impact of unemployment, but differentiating the timing of unemployment relaxes this risk somewhat since it essentially starts the clock over for "ever experienced" at the first birth. For example, in the "post-1st birth ever experienced unemployment" indicator, respondents are only considered as having experienced unemployment if it occurred after the first child was born and not before. In this way, the initial dip in career trajectories from an intergenerational perspective is somewhat controlled for.

Results of the Event History Models

Table 1 shows results of the model that assesses whether ever having been unemployed matters to the decision to have a second child. The model is run twice with a change in reference groups in order to present results that show the impact of unemployment in the two time periods and facilitate easier interpretation of the results. The timing of unemployment is decomposed by its relation to the timing of the first childbirth. All results indicate that the timing of unemployment matters greatly. Focusing first on the Soviet Union time period, the results suggest that on the few occasions respondents experienced unemployment, they were less likely to have a second child. The results are remarkably strong and similar for both men and women: 87% and 89% lower risk, respectively. In contrast, the impact of unemployment on second birth risk if unemployment occurred before having had a first child is not statistically significant. The change in the impact of unemployment in the post-transition time period appears to be a slight weakening for women, now a 79% lower risk, and an ambiguous impact for men. The relative

risk for men is no longer statistically significant in the post-transition era, but it is in the same direction.

Table 1 Second birth estimates from piecewise constant event history models: Unemployment Model

Transition to a second birth		
Unemployment Model: Changing effect of ever having experienced unemployment		
	Men	Women
Never was unemployed	1	1
Unemployed before first birth	0,81	0,89
Unemployed after first birth	0,66	0,21 ***

Note: model controls for time since first birth, age at first birth, whether respondent was surveyed in St. Pet. or Moscow, missing categories, siblings, urban/rural birth, union status, educational level, labor force status and occupational class. Statistical significance: * =10%, ** =5%, *** =1%. The results are from two separate models, one for men and one for women.

Given that the occurrence of unemployment increased dramatically in the post-Soviet time period, a risk as dramatically reduced as 79% for those who experience unemployment has serious consequences for the Russian fertility rate. Remarkably, this impact occurs only for women however.

Why does experiencing unemployment matter to women's second birth risks only when it occurs after they have had their first child? First, unemployment may not matter to second birth decisions if it occurs *before* the first child is born because achieving job stability after a spell of unemployment may lessen the effect of the spell in the past due to time elapsed. In other words, the experience of unemployment may not have a lasting impact. If women find or continue employment after the first birth, they may no longer be affected by their past experience of unemployment. This may be particularly likely since the intervals between 1st and 2nd births are increasing and quite high (about 5 years) in Russia (see, Zakharov, 2008). Therefore, the decision to have a second birth may be made years after any unemployment spell that occurred before the first child was born. This explanation will be further tested by adding a duration spline to the previous model that will capture time since last unemployment spell. If the impact lessens over time on average, we can assume that unemployment simply has an impact that is short-lived and will not influence much later fertility decisions.

Conversely, unemployment may matter to the decision to have a second child only if it occurs *after* the first child is born as evidence of a direct cost mechanism in which women perceive the cost of childbearing as too high when they are not contributing to household income. In other words, if they are not gainfully employed, their household welfare may be lower than what is comfortable. However, it could also be that mothers perceive their negative labor market experiences as related to having become a mother and are not willing to have another child because of these difficulties. Having had a child may have decreased employment prospects or increased difficulties in keeping an acceptable job, both of which hint at a work-family conflict.

On the other hand, and as in the previous explanation for why no impact of unemployment appeared before the first birth, a more recent experience of unemployment may matter more than a distant one simply because the uncertainty entailed in job loss is fresher in one's mind. This explanation revolves around an effect that is the duration since unemployment.

Two other possible explanations emerge when considering why an unemployment spell after the first child has been born particularly deters second birth risks. Women who claim unemployment rather than claiming inactivity after having their first child may be a highly selective group of women that are particularly oriented toward participating in the labor force and generally less pre-disposed to wanting another child. Finally, the impact of unemployment after the first birth may be related to the fact that human capital investment is less likely for women during maternity or parental leave. At this point in women's careers, which comes later than an unemployment spell before the first child was born, unemployment may be reflecting an altogether different scenario in which women find themselves less competitive in the labor market than they may have been before when career tenure and skill accumulation was likely more even among peers.

Analyzing women in the two waves of GGS data may offer some useful information on the first explanation, revolving around the dual impact of birth and unemployment on household finances We already know that when a second child is born to a two parent family it increases the poverty risk of this family by 50% (Ovcharova et al., 2005).

The second explanation, revolving around difficulties in combining work and family, can be assessed by analyzing the order of events surrounding unemployment spells. In the EES data, 259 women experienced unemployment after the first child was born. The average duration was 54 months, whereas the median length was 30 months. If we look at what women were doing immediately before becoming unemployed we see that of the women who had had their first child already, 86% were working before they entered unemployment. Very few went straight from maternity leave to unemployment or from not participating in the labor force. This finding indicates that unemployment mostly occurred due to the loss of a job, rather than the inability to find one. The fact that women claimed they were unemployed rather than not active in the labor market indicates that they did not walk away from their jobs because they preferred to stay at home, but rather they still wanted to participate in the labor force. In fact, in the two waves of GGS (2004 and 2007), 95% of women in the panel sample who were on leave strongly professed a desire to return to work immediately following the leave. It appears then that women either needed to change jobs or were forced out of their jobs, both of which strongly imply difficulties related to balancing work and family. When asked directly about why the respondent left her previous job, 82% of unemployed women in 2004 claimed that there were staff reductions at her last place of work or cited other reasons such as low pay or uncomfortable schedules. In 2007 this pattern persisted, but with an even higher share of women out of work due to staff reductions.

The third explanation regarding the longevity of an unemployment impact will be assessed in the same way as was previously mentioned; using EES data, we will analyze time since the unemployment spell by re-estimating the hazard model and including an additional duration spline.

The fourth explanation—selectivity into labor force participation when not working—has two aspects worth considering. First, we might expect women to step out of the labor force after having their first child if they experience job loss or cannot find a job. In this scenario, women would transition from maternity leave to unemployment to inactivity, rather than maternity leave to work to unemployment. Therefore, we should see that unemployment spells are most often followed by spells of not participating in the labor force, either through officially going on leave or simply staying at home. Regardless of whether women went on to have a second child, this is not the case. Rather, women overwhelmingly transitioned out of unemployment spells into paid employment; 64% of women who were unemployed after having one child surveyed in the EES were then employed, 26% claimed they were inactive, 5% went on leave and 4% became pensioners or chose other options. This finding contradicts the idea in current literature that registered unemployment might be a first step to inactivity for women (UNPD, 2005[4]).

Nevertheless, unemployed new mothers may still be a select group because they claim being unemployed rather than just stepping out of the labor force when times are tough. These women might have particularly strong labor market orientations. Therefore, selection equations will be used to analyze whether women select themselves into participating in the labor force, whether they end up employed or unemployed. After correcting for this selectivity, the results will indicate whether the relationship that has been observed between unemployment and second birth risks is simply due to a selection bias.

Finally, the explanation that centers on human capital depreciation for women who take extended leaves, we will also include length of maternity or parental leave that was taken before a woman returned to the labor market in the previous hazard model. Almost 60% of women who record taking a leave after the first birth took around three years of maternity and parental leave. Nevertheless, there is significant variation in leave durations that might bear unfavorably on their options when returning to work.

length	%
2 mo.	2.0
2- 6 mo.	6.6
6-12 mo.	2.7
12-18 mo.	9.6
18-24 mo.	9.4
2-3 years	12.6
3 + years	57.2

[4] http://www.undp.ru/Gender_MDG_eng.pdf