

**Maternity leave in Russia: Policies and effects on labor market transitions and
childbearing**

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DRAFT ONLY: PLEASE DO NOT CITE WITHOUT PERMISSION

The conflict between women's employment and fertility has long been of concern to sociologists and demographers (Brewster and Rindfuss 2000, Rindfuss et al 2003). Combining work outside the home and childrearing is inherently difficult; only under rare conditions can both be undertaken simultaneously. In order to participate in the labor force, childrearing (and hence childbearing) must be curtailed, or some alternative means of childcare must be found. Maternity leave is a common strategy that reduces the conflict between employment and childbearing, at least temporarily. Maternity leave policies have been enacted to maintain women's participation in the labor force after childbirth, promote gender equality by helping women uphold their position in the labor force, and encourage couples to have more children. The evidence that parental leave improves any of these outcomes, however, is mixed (Ruhm 1998, Gauthier 2007). Partially this is due to the nature of such studies, which have primarily been based on macro-level analyses that use aggregate data and are influenced by many intervening factors (Neyer and Andersson 2007).

This study evaluates the association of maternity leave with employment outcomes and childbearing behavior in Russia using individual-level data. It employs the Survey on Stratification and Migration Dynamics, a rich and comprehensive survey that includes detailed retrospective questions on maternity leave in its employment histories. By analyzing retrospective employment and reproductive histories from 1985-2000, we can examine to what extent maternity leave led to an increase in second birth rates, or influenced women's labor market transitions (entry or exit into the labor market and job mobility). Since maternity leave was not utilized by all women, the study capitalizes on the variation in usage and duration of maternity leave.

Russia is an interesting case for studying maternity leave due to its history of socialist family policies and subsequent rapid social and economic transformation. State-supported maternity leave was first introduced in 1981, when the 26th Soviet Congress called for measures to increase female labor force participation and fertility. At this time, women on maternity leave received full pay up to 112 days, partial-pay up to 18 months, and unpaid leave from 18 months to 3 years (Zakharov 2008). The pay varied across regions, with women in Siberia and the Far East receiving slightly more per month. In 1990 the maternity leave benefit-scheme was reformed, with women who worked prior to leave receiving the minimum wage (70 rubles) for 18 months and women who had never worked receiving half the minimum wage for 18 months. Unpaid maternity leave was expanded to three years without interruption of social security benefits and a guaranteed return to previous employer. The amount of the benefit depended on whether a woman was insured through her workplace, but uninsured women also received a token amount. Unfortunately, rampant inflation throughout the 1990s reduced the value of maternity leave benefits, resulting in trivial monthly payments (Zakharov 2008).

Because of the changing value of payments, maternity leave may or may not have played a role in promoting women's attachment to the labor force, especially given the rapid transformation of the labor market. The collapse of the state socialist economy and the introduction of market reforms at the outset of 1992 disrupted the labor market, yielding sharp declines in real wages, structural dislocations, growing unemployment, and widespread wage arrears (Gerber and Hout 1998; Gerber 2002, 2006). Relative to Russian men, Russian women were better able to maintain access to employment, but they experienced growing disadvantage in the quality of jobs (Gerber and Mayorova 2006). Some have argued that discrimination

against women also increased during this period (CEDAW 1999). Market forces eroded Soviet institutions and policies that suppressed gender discrimination, allowing latent patriarchal attitudes to emerge (Khotkina 2001; Rzhantsyna 2001; Ogloblin 1999, LaFont 2001). New mothers on maternity leave could have become the most vulnerable to market forces - the first to be fired and last to be hired. On the other hand, maternity leave was instituted to protect women's position in the labor force, and these policies may have reduced disadvantage in the labor market. This study analyzes whether maternity leave protected women as the policies originally intended or whether taking maternity leave became ineffective as market pressures overwhelmed social protections.

As mentioned above, maternity leave has also been implemented in some countries as a strategy to raise fertility. Proponents of these policies argue that maternity leave provides women with the means to be paid for taking time off from work, thus temporarily alleviating the burden of withdrawing from the labor force to raise young children. We test this argument by analyzing the effects of taking maternity leave after a first birth on the hazard of having a second birth. Again, the Russian case is particularly interesting given the social and demographic change that swept the country after the disintegration of the Soviet Union. In the post-Soviet period, total fertility rates declined from 1.89 in 1991 to 1.17 in 1999, one of the lowest levels in the world (Vishnevskii 2001). The majority of the decline was due to the postponement or elimination of second births; first births remained relatively young and universal. Thus, maternity leave may have played an important role in determining who had second births - women who were able to balance employment and childbearing in such an uncertain economic climate may have decided they could afford to take time off to have an additional child.

One of the methodological problems with studying the effects of maternity leave on employment transitions and fertility is that the decision to take maternity leave may be endogenous to employment prospects or the decision to have another child. In other words, women who feel more secure in their employment may take maternity leave and subsequently be more likely to reenter employment, less likely to be fired, and less likely to quit. Likewise, selection effects could be occurring with respect to fertility: women predisposed to having additional children may be more likely to take maternity leave. Using techniques described by Lillard and Panis (2003), we will examine the unobserved heterogeneity that may influence both maternity leave and employment transitions or maternity leave and fertility. Controlling for unobserved heterogeneity may allow us to observe whether the effects of maternity leave are indeed causal.

MATERNITY LEAVE AND EMPLOYMENT

All industrialized countries have implemented some form of maternity leave policy to help mediate the conflict between childbearing and employment (Gornick et al 1998), yet the exact effect of these policies on gender equality in the labor force is uncertain. Some studies demonstrate that the availability of maternity leave has had a positive effect on female labor force participation. For example, in the U.S. the availability of leave increases labor force attachment and promotes early return to work after first birth (O'Connell 1990). The availability and use of maternity leave also encourages women to return to their previous employer and provides a wage premium that buffers the wage costs of motherhood (Waldfoegel 1998). In a cross-national study, Gornick et al (1998) found an association between policies

that support maternal employment and the effect of having young children on mother's employment probability.

On the other hand, maternity leave policies may have a negative effect on women's labor force participation and gender equality. Although women may be guaranteed employment in the same firm when they return from maternity leave, time out of the labor force may result in lower job retention and long-term wages (Budig and England 2001, Gangl and Ziefle 2007). There may also be an optimal length of maternity leave, in which entitlements to short periods of paid leave have little impact on wages, but longer periods reduce wages (Ruhm 1998). Thus, it is not clear whether maternity leave will ultimately benefit or harm women's work trajectories.

In Soviet Russia, the state not only encouraged women to work, but introduced strong policies to keep women in the labor force, such as expanding daycare accessibility and quality, and allowing mothers to work shorter days with more flexible hours (Zakharov 2008). Paid maternity leave was one of the main measures implemented to help women balance work and childrearing. As a result, female labor force participation rates were very high and nearly the same as for men (Gerber and Mayorova 2006).

Nonetheless, true equality in the labor market or the home never materialized (Brainerd 2000, Kon 1995). State policies excluded women from night shifts and hazardous labor (Dudwick et al 2002) and women primarily held jobs in semi-skilled professional or low-skilled jobs (Brainerd 2000). Women were expected to work outside of the home, but they were also expected to do the majority of childrearing and domestic chores, often called the Soviet "double burden" (Brainerd 2000, Dudwick et al 2002). Therefore, despite extensive female labor force participation, conservative gender roles and norms were maintained.

With the breakup of the Soviet Union, these conservative gender roles began to emerge into the public sphere. State authorities no longer explicitly encouraged women to participate in the labor force, and some policy-makers began to call for women to return to the home to perform their “natural” duties (Teplova 2007). Given the collapse of social institutions and enforcement agencies, as well as the increase in corruption, capitalist firms may have been able to ignore mandates to protect gender equality, instead focusing on profits.

On the other hand, the state was very strong during the Soviet period, and it is unlikely that the strength of social protections dissipated that rapidly after the collapse. To a large extent, Russians still relied heavily on socialist institutions, expecting state services such as universal health care, pensions, and a strong safety net. A study in post-Socialist Ukraine showed that many women expect the government to provide support for families and childbearing, especially paid maternity leave (Perelli-Harris 2003). Thus, although the value of maternity leave payments may have declined in post-Soviet Russia, we still expect that the policy provided employment protection and a way to maintain a foothold in the labor market.

MATERNITY LEAVE AND FERTILITY

Governments have also implemented family leave policies with the goal of raising fertility. Again, the evidence for the impact of these policies on fertility is mixed or weak at best (Gauthier 2007). The most compelling evidence that changes in parental leave policy can raise fertility is Sweden’s “speed premium,” which expanded the length of time parents could retain parental leave benefits without returning to work to two years, resulting in an increase in second birth rates (Hoem 1993). Likewise, in 1990 Austrians increased the tempo of third births following the government’s extension of the parental-leave period, resulting in the

reversal of a decades-long decline in third birth rates (Hoem, Prskawetz, Neyer 2001). Finally, father's uptake of parental leave in Sweden is related to higher second- and third-birth propensities, although this relationship disappears with extended periods of leave (Duvander and Andersson 2006).

Soviet officials implemented maternity leave with explicitly pro-natalist goals, and macro-level analyses do show that directly after the implementation of family policies in the 1980s, fertility increased from a TFR of 1.89 in 1980 to 2.22 in 1987 (Zakharov 2006). However, the increase in fertility was merely a timing effect, in particular the shortening of the gap between first and second births. Cohort fertility did not increase in the long run, although it is debatable as to whether fertility would have declined even further without the policies (Zakharov 2006). Nonetheless, we expect that on the individual level, once period effects are controlled, maternity leave does lead to an increase in second birth rates, as it temporarily alleviates the conflict between paid work and childrearing.

DATA AND ANALYTIC STRATEGY

We analyze changes in childbearing, employment behavior, and maternity leave from 1985-2001 using the Survey on Stratification and Migration Dynamics in Russia. The SMDR was conducted on a multistage, stratified probability sample of 7176 Russian adults in three waves from September 2001 - January 2002. The second author designed special batteries of questions for the survey that elicit the respondent's entire fertility, marital, work, and residential histories from December 1984 through the month of the survey. These histories allow us to estimate event history models of births, labor market transitions, and maternity leave, while incorporating time-varying covariates.

To test whether maternity leave enhances the workforce attachment and job mobility of women who have children, we estimate discrete time hazard models for four outcomes: entry to a new job (for those currently unemployed, out of the labor force, or on maternity leave) and job loss, voluntary employment exit (quits), and employer change (for those currently working or on maternity leave). In a separate paper (Gerber and Perelli-Harris 2008) we examine how young children in the home and marital status affect these four labor market events for women, but in those analyses we exclude women on maternity leave. Here we incorporate women into the risk sets for all four outcomes during months when they are on maternity leave and we estimate the effects of being on maternity leave on the hazard of experiencing each outcome relative to being out of the labor force (for job entry) or to hired employment (for job shift to a new employer, job loss, and voluntary quit). It may seem unconventional to treat women on maternity as at risk for employment entry (implying they are not currently employed) and also at risk for job loss, voluntary employment exit, and employer change (implying they are currently employed). However, maternity leave represents a distinctive labor force status that shares some characteristics with non-employment (women on maternity leave are not actively working) and with employment (since they formally hold a job, have an employer, etc.) at the same time. The observation for these analyses is 1988-2000 due to data limitations that make it impossible to identify the number of children under 3 living at home for 1985-1987 and pregnancies that began after December 2000.

We next analyze the influence of uptake of maternity leave on fertility by using discrete-time hazard models of second birth rates. The dependent variable is the log-odds of having a second conception in month t . Respondents enter the risk set in the month following their first birth and they are censored at the time of the interview or a conception that ends in a

second live birth. We backdate conceptions to 8 months before the birth, which is often when the decision to keep a pregnancy is made. Unfortunately, the data does not include information about abortions or miscarriages. Also, because there are no questions establishing whether respondents are pregnant at the time of the interview, we do not observe any conceptions within a nine-month window preceding the interview, i.e. January 2001-September 2001 for the September 2001 respondents, March-November 2001 for the November respondents, and May 2001-January 2002 for the January 2002 respondents. For simplicity, we deal with this problem by truncating our observation window at the end of December 2000 for all respondents.

As mentioned above, one of the main methodological concerns in these analyses is selectivity. Women who took maternity leave may have felt more secure in their employment prospects thus experiencing better employment outcomes. Likewise, selection effects could be influencing fertility: women predisposed to having additional children may have been more likely to take maternity leave. To correct for these selection effects, we develop models that account for unobserved heterogeneity. Using aML, we will run a model that predicts uptake of maternity leave simultaneously with the employment models, and then with the fertility models. We will examine the common heterogeneity component to see whether it is significant and how its inclusion changes the effects of maternity leave on outcomes. (This analysis is still not complete, but will be included in the final paper).

Independent Variables.

Maternity leave. The main activity histories asked respondents to identify the month and year of each time they either began a “leave due to pregnancy or to look after a child” or returned

from such a leave to either their prior job or a new job (these two possibilities were distinguished). They also asked the month and year of any job losses, voluntary quits, employer changes, new jobs, and other changes of workforce status (starting to look for work, entering full-time schooling, leaving the work force due to retirement or disability, etc.) We used the information from these histories to identify the respondent's main activity at any given month during the observation period. We code respondents who, at a particular month, are not working and not looking for work as "not in the labor force," while those who have no job and are actively looking for work are "unemployed." Other options include: working, studying in school, serving in the military (although this is rare for women and not included in our analyses), retired/disabled, or other activity. These other main activities are included as controls in the models.

Maternity leave can be associated with higher rates of conception both during the leave itself and after a woman who took maternity has returned to work. Moreover, the effect of both current and previous maternity leave can vary with its duration. Accordingly, we initially specify the effects of maternity leave on the hazard of second conception using two time-varying categorical variables: one denoting the length of a current spell of maternity leave, one denoting the length of a previous spell of maternity leave. The categories for each of these variables are as follows: 0 months (not currently on maternity leave/no maternity leave taken in connection with first birth), 1-9 months, 10-18 months, 19 to 36 months, and 37+ months. While respondents are on maternity leave following their first birth, their value on the current maternity leave variables shifts with the passage of time. When they return to work (or otherwise leave maternity leave) then they receive a value of 0. In effect, duration of current maternity leave is a straightforward expansion of the "maternity leave" category for the

respondent's current main activity: when respondents are not on maternity leave, they fall into one of the other categories: working, in school, retired/disabled, not in the labor force (not working and not looking for work), unemployed, or some "other" activity identified by the respondent. When they are on maternity leave, they receive a zero on the dummy variables denoting these other forms of main activity and they receive a one on the dummy variable corresponding to the relevant duration category. Thus, the dummy variables for maternity leave capture the contrast between a particular duration and the baseline category (working).

Respondents are assigned a value of zero on prior maternity leave so long as they are currently on maternity leave. Once they leave maternity leave, they are assigned the value that corresponds to the number of months their maternity leave lasted. If they did not take any maternity leave, they have a value of zero throughout. Thus, the dummy variables for prior maternity leave contrast each duration category to the baseline value of no maternity leave taken. Note that prior maternity leave can only have an effect on those women who do not experience a second conception while they are on their first maternity leave, because these women are censored at the time of their second conception.

Period measures. It is important to control for the sweeping changes in Russian society that occurred throughout the period of observation. As discussed above, the economic situation deteriorated after the collapse of the Soviet Union, and fertility, particularly of second births, declined dramatically. Our models for labor market transitions specify period using dummy variables for 1992-4, 1995-8, and 1999-2000, representing the early, middle, and later transition periods, which are compared to the pre-transition baseline of 1988-1991. We also test for change in the effect of maternity leave on labor market transitions using an interaction between maternity leave and a dummy variable for post-1991. The fertility models include

dummy variables for three periods: 1985-1989, 1990-1995, and 1996-2000 (baseline).

Interaction terms between maternity leave and period are not included in the fertility models, because their coefficients are not significant.

Other controls. The fertility models also control for a standard set of variables that influence fertility. We specify respondent's current education using dummy variables for university, specialized secondary (pre-professional training at the secondary or post-secondary level), lower vocational, and less than secondary, with a general secondary degree as the baseline. To control for respondent's age, we include her age at the time of her first birth, as well as a measure of the months elapsed since first birth. Our initial tests showed that a third-order polynomial specification of months elapsed since first birth provides the optimal fit to the data. The employment models include controls for age, marital status, current pregnancy, number of children under 3, number of children over 3, and period effects. The optimal specifications of these variables are taken from Gerber and Perelli-Harris (2008), where we also discuss these effects in considerable depth.

PRELIMINARY RESULTS

Descriptive statistics

Table 1 shows the duration of maternity leaves taken following first births reported by respondents aged 15 to 44. Note the trend toward taking no maternity leave at all. The apparent trend away from very long maternity leaves should be viewed with caution because we do not include 38 maternity leaves that were ongoing at the time of the survey but had not yet reached 37 months in duration: some of these undoubtedly crossed that threshold before they ended, so our figures for period 3 probably understate the proportions of longer maternity leaves.

Table 2 shows the main activity of women who did not take maternity leave at the time of their first birth, by period. The majority were employed during period 1; by period 3 (when the rate of taking no maternity leave was greatest) 52% were either in school or out of the labor force at the time of birth.

Effects of maternity leave on labor market activity

As mentioned above, these models stem from our work on the relationship between family structure and employment transitions (Gerber and Perelli-Harris 2008). In the models shown here, we incorporate the effects of maternity leave into the previously specified models. Table 3 shows the significant effects of maternity leave on all four labor market outcomes. In this table, we report separate results from models estimated on the entire sample of 15-44 year old women and models estimated on a restricted sample including only women with children under 3 in the household. The former offer us more statistical power, but the latter are potentially more informative because to assess the impact of maternity leave it makes most sense to compare women who are on maternity leave with those who are not but could be rather than those who generally have no risk of being on maternity leave (because they do not have children under 3 in the home).

For each outcome, maternity leave has a significant and positive effect on women's labor force attachment. The same pattern of results obtain whether we analyze the sample of person-months during which all 15-44 are at risk of the event or the sample of person months during which only women of that age who have children under 3 at home are at risk. In some cases, however, we find that the effect of maternity leave only obtains during the post-Soviet era.

Compared to women who are not in the labor force – i.e., those who have no job and who are not looking for work – women on maternity leave with otherwise identical characteristics were no more or less likely to enter work during the Soviet period. However, since the Soviet collapse women on maternity leave have been substantially more likely in any given month to enter employment. Among women with at least one child under 3, the hazard ratio is 2.42. Apparently, maternity leave did not have much impact on women's access to employment during the Soviet era, when jobs were generally plentiful, but it plays an important role in securing women's access to employment during the post-Soviet era, when jobs became scarcer.

A similar conclusion follows from our results with respect to job loss. During the Soviet era, when layoffs were rare, women on maternity leave were no more or less likely to lose their jobs than women who were actively working. But after the Soviet collapse, when layoffs became far more common due to the sharp economic contraction accompanying market reforms, maternity leave dramatically reduced exposure to layoffs: while on maternity leave, women's hazard of layoff was only about 1/3 that of otherwise similar women who were actively working. Thus, during the post-Soviet era maternity leave not only gave women enhanced access to employment (relative to simply being out of the labor force), it also protected women from being laid off. Neither effect obtained during the late Soviet period. Despite concerns that maternity leave policies have been weakly enforced in the post-Soviet era, it appears that in fact it has been precisely during this period that the policies have come to serve their intended purpose of protecting Russian mothers' access to employment.

Our models for the other two outcomes also revealed significant effects of maternity leave, but in these cases the effects obtained during both the Soviet and post-Soviet periods:

the interaction term between maternity leave and the post-Soviet dummy variable were not significant, but the main effect of maternity leave was significant in both models. Women on maternity leave have been about 1/3 less likely to quit their jobs than women who are actively working and have the same characteristics on all the control variables. This may not seem surprising, but it does suggest that maternity leave has helped Russian women maintain their place in the workforce.

Finally, women on maternity leave had rates of job mobility (employer change) about twice as high as women currently working with similar characteristics. This finding is somewhat counterintuitive, because it seems like women who are on maternity leave might not be attractive hires for prospective employers. However, the effect obtains both for the whole sample and among women with children under 3, which implies that we cannot attribute a tendency for women on maternity leave to change their criteria for a good job as a result of having young children. We cannot rule out the possibility that women on maternity leave experience more pressure to find a new employer. However, it seems more plausible that while women are on maternity leave they have more time to search for new job opportunities (especially compared to women with young children who are actively working). Particularly if a woman is unhappy with the conditions of her current job, maternity leave might afford her the chance to seek a better situation elsewhere. This is yet more evidence that maternity leave has yielded positive advantages on the labor market for Russian women.

Altogether, our evidence that maternity leave is beneficial to Russian women's attachment to and success in the labor force is clear and consistent. Moreover, in stark contrast to the pessimistic scenarios raised by concerned observers who feared that maternity leave

policies had become ineffective after the Soviet collapse, our analyses show that in fact the labor market benefits of maternity leave increased during the post-Soviet era.

Effect of maternity on subsequent fertility

Our results show that both current and prior maternity leave are associated with elevated hazards of a second conception (Table 4). In both cases, the effects apply only for certain durations. Women who are currently on maternity leave have higher rates of second conception than women who are working, but only after they have been on leave for more than nine months. This is evident from model 1, where the parameter estimates are nearly identical for the three longest durations. Although the effects of 10-18 months and 37+ months do not differ statistically from zero, when we constrain the effects of all three durations greater than 9 months to be equal (or, equivalently, use a single dummy variable for 10+ months) and omit the effect of 1-9 months (model 2), the result is highly significant and the model fit deteriorates negligibly despite the conservation of three additional degrees of freedom. Women with one child who are on maternity leave and have been so for 10 months or more have about 50% higher odds of a second conception than women with one child who are working, holding all the other variables constant. Women who are only on maternity leave for 1-9 months do not differ from women who are working in terms of their hazard of a second conception.

Nonetheless, taking a maternity leave of 1-9 months does increase the hazard of second conception: it does so *after* the woman who takes a leave of this length returns to work. The effects of *prior* maternity leaves of longer length do not differ significantly from zero in contrast to no prior maternity leave at all; accordingly, only women who take 1-9 months experience a subsequent boost in their fertility (model 3). Their odds of a second conception

are more than twice as high (2.18 times) as those for women who either took no prior maternity leave at all or who took more than 9 months of maternity previously but are no longer on maternity leave.

The effect of prior maternity must be considered when interpreting the effect of current maternity leave. The elevated fertility of women currently on maternity leave for 10 or more months is relative to women who are currently working (the omitted main activity baseline), some of whom had previously been on maternity leave for 1-9 months. In fact, currently working women who had a prior maternity leave of 1-9 months have 50% *higher* odds of a second conception than women who are currently on maternity leave for 10 months or more ($2.18/1.46=1.50$). In turn, the latter women have 46% higher odds than currently working women who either took no maternity leave or took a leave of at least 10 months duration.

We note as well that the effects of control variables all conform to expectations. Women who are not in the labor force – i.e., neither working nor on maternity leave – have higher rates of second conception than otherwise similar women who are currently working. Women engaged in an “other” activity have particularly elevated rates of second conception, but this applies to a small number of women and we cannot say what the various “other” activities were. Women with university education have lower odds of a second conception than women with a general secondary degree or less. The older a woman is when she has her first birth, the lower her odds of having a second birth. The effect of time since first birth is curvilinear. The third order polynomial specification implies two changes in direction (Figure 1). The odds of a second conception initially increase, but at a markedly slower rate than observed in countries where the modal spacing between first and second births is approximately two years. In contemporary Russia the hazard of a second conception initially

peaks at 42 months following the first birth, implying that the modal spacing between first and second births is about 50 months. Then the hazard of a second conception declines, but it increases again starting at 143 months. This means that women who had a first birth about 12 years earlier and have not yet had a second birth experience growing hazards of a second conception from that time forward. Our results therefore imply that very large spacing between first and second births is exceptionally common in Russia: Russian women are as likely to conceive a second child 15 years after delivering their first as they are 7 years after doing so. The period effects capture the dramatic decline in second birth rates over the period under study.

To sum up the main finding regarding the effect maternity leave on fertility: women who have *previously* taken 1-9 months of maternity have the most elevated fertility rates of all. One interpretation of this finding is that a maternity leave of a relatively short duration provides women with a positive experience and thus enhances their subsequent inclination to have another child, presumably because they are confident they can take maternity leave and return to work without it severely disrupting their career or their childcare activities. In contrast, women who take long maternity leaves (10 months or more) have elevated rates of second conceptions compared to women who are currently working who previously took no maternity leave or a long leave. But once women return to work after a long maternity leave (10+ months), their subsequent fertility does not differ from that of women who took no maternity leave at all. One possible interpretation is that Russian women might use extended maternity leaves as a way to maintain a toehold in the workforce while they try to have a second child. If they do not conceive a second child during their extended maternity leave,

then perhaps they experience some loss of their standing at work when they return and therefore opt not to have another child and risk a similar loss of standing.

Unobserved Heterogeneity

(To be included in final paper).

DISCUSSION

Our preliminary findings demonstrate that maternity leave is indeed beneficial for promoting women's attachment to the labor force and increasing fertility. The results show that women are one-third less likely to quit employment when they are on maternity leave, suggesting that maternity leave acts as a placeholder for women in the labor force during the early years of childrearing. As women reenter the labor force, they are nearly twice as likely to change jobs as women who are currently working. This finding indicates that even though women may be compelled to find new jobs when they reenter employment, employers were still willing to hire women that have been on maternity leave rather than assuming their skills deteriorated as they were caring for young children.

Maternity leave provided an even more important role in protecting Russian mothers' access to employment during the post-Soviet economic crisis. Even though jobs were in short supply, women on maternity leave had a hazard of reentering employment twice as high as those who were unemployed or not in the labor force. During the Soviet period, when jobs were plentiful, maternity leave had no effect on entering employment, suggesting that the policy was only truly effective in the post-Soviet period. The policy also appears to have protected women from being laid off; women who were on maternity leave had a hazard of

layoff only about 1/3 of otherwise similar women who were actively working. This finding counters claims that the introduction of capitalism allowed for increased discrimination against mothers or that firms were able to ignore maternity leave regulations and lay off workers. Instead, our results provide evidence that maternity leave policies continued to help women negotiate the early months of childrearing and maintain an attachment to the labor market.

Women who took maternity leave also had higher rates of bearing a second child, especially when accounting for duration. Women who were currently on maternity leave and had been so for more than 10 months had higher second birth rates than women who were working. What is particularly interesting is that women who took 1-9 months of maternity leave and then returned to work had the highest second birth rates. This could indicate a positive experience with a relatively short maternity leave along with a positive attachment to the labor force, resulting in the desire for a shorter interval between first and second children. On the other hand, women who took a longer maternity leave may have felt the need to reestablish themselves in the labor force to regain lost skills or recuperate work experience. Given the traditionally long birth interval between first and second births - an interval which increased even further after the collapse of the Soviet Union - it is not surprising that women who took extended maternity leave and then returned to work postponed childbearing until a more advantageous time. Unlike in the employment models, however, the effects of maternity leave duration on second births did not differ before and after the transition, indicating that maternity leave did not prevent the rapid decline in fertility that occurred in the 1990s.

This study provides important insights into the relationship between maternity leave, employment transitions and fertility, but due to data limitations many questions are left unanswered. We are unable to track changes in maternity leave policies or access to benefits.

We do not know if women had an option to take or not take maternity leave, or how uniform the payments were across regions, especially during the period of rapid inflation. If women had had similar access in the earlier period, results may have been very different.

Nonetheless, few studies have shown such strong individual-level effects of maternity leave on employment transitions or fertility. These effects are particularly interesting given the rapidly changing economic, political, and social environment in Russia during the post-Soviet period. Given that uncertainties in the labor market and very low fertility continue to plague Russia, this research shows that it is imperative that maternity leave policies be maintained.

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Table 1. Duration of maternity leave for women who have had a first birth

<i>Duration:</i>	None	1-9 months	10-18 months	19-36 months	37+ months	Row N
Total	47%	2%	10%	23%	17%	957
By period of birth:						
1985-1989	43%	2%	11%	26%	19%	445
1990-1995	45%	2%	8%	25%	19%	298
1996-2000	58%	1%	12%	16%	12%	214
By age at time of birth:						
15 to 19	63%	1%	7%	17%	12%	181
20 to 24	46%	2%	12%	21%	19%	450
25 to 29	42%	2%	11%	28%	16%	218
30 to 34	36%	3%	8%	33%	21%	76
35 to 39	25%	0%	7%	39%	29%	28
40 to 44	75%	0%	0%	0%	25%	4
By education at time of birth:						
Less than secondary	64%	2%	2%	23%	9%	44
Lower vocational	44%	2%	10%	24%	20%	176
Secondary	70%	1%	5%	13%	11%	272
Specialized secondary	34%	1%	14%	30%	21%	270
VUZ degree	33%	4%	15%	28%	20%	195
By marital status at time of birth:						
Never married	51%	0%	13%	25%	11%	61
Married	47%	2%	11%	23%	18%	798
Cohabiting	42%	2%	8%	27%	22%	64
Separated/divorced	38%	0%	0%	38%	23%	13
Widowed	25%	0%	25%	0%	50%	4

Note: Cell entries are row percentages. Maternity leaves that are ongoing at the time of the survey are not included, because their eventual duration cannot be determined. N=957. Variation by marital status is not statistically significant.

Table 2. Current activity at time of first birth of respondents who took no maternity leave, by period

	1985- 1989	1990- 1995	1996- 2000	Total
Working for hire	61%	42%	38%	48%
In school	26%	38%	32%	31%
Retired/disabled	1%	2%	0%	1%
Unemployed	3%	3%	6%	4%
Not in labor force	7%	14%	20%	13%
Self-employed	1%	0%	3%	1%
Other	1%	1%	0%	0%
Unobserved	1%	0%	2%	1%
N	178	134	125	

Note: Cell entries are column percentages

Table 3. Effects of maternity leave on labor market transitions

Event	<i>Job entry</i>	<i>Job loss (layoff)</i>	<i>Voluntary quit</i>	<i>Job mobility (employer change)</i>
Risk set	Unemployed, not in labor force, on maternity leave	Employed, on maternity leave	Employed, self-employed, on maternity leave	Employed, self- employed, on maternity leave
Contrast group	Not in labor force	Employed	Employed	Employed
Maternity leave effect, all women 15-44				
1988-1991	1.00	1.00	0.65	2.33
1992-2000	1.61	0.35	0.65	2.33
N respondents	1466	2517	2528	2528
N events	1535	354	813	956
Months at risk	57778	239548	243132	243132
Maternity leave effect, women 15- 44 with child(ren) under 3				
1988-1991	1.00	1.00	0.67	1.96
1992-2000	2.42	0.36	0.67	1.96
N respondents	864	1093	1101	1101
N events	638	28	123	191
Months at risk	24113	36166	36447	36447

Note: Effects are reported as expected hazard ratios contrasting women on maternity leave to those in the baseline category. All those that depart from unity are significant at $p < .05$. They are estimated using piecewise constant models controlling for age, education, marital status, pregnancy, number of children under 3, number of children over 3, and period. Reduced form models and additional controls for change over time in the effects of family-related variables yielded nearly identical estimates.

Table 4. Discrete-time hazard models from first birth to conception, women age 15-44

	<i>Model 1</i>			<i>Model 2</i>			<i>Model 3</i>		
	Exp(B)		T	Exp(B)		T	Exp(B)		T
Duration of prior maternity leave (no prior maternity leave)									
1-9 months	2.34	**	3.00	2.33	**	3.04	2.18	**	2.88
10-18 months	1.13		.59	1.13		.60			
19-36 months	1.24		1.24	1.24		1.25			
37+ months	.92		-.28	.92		-.28			
Duration of current maternity (not currently on maternity leave)									
1-9 months	1.01		.03						
10-18 months	1.55	#	1.74	1.55	**	2.58	1.46	*	2.35 ^B
19-36 months	1.56	*	1.97	1.55	**	2.58	1.46	*	2.35 ^B
37+ months	1.51		1.07	1.55	**	2.58	1.46	*	2.35 ^B
Main activity (working)									
In school	.83		-.61	.83		-.66	.80		-.81
Retired/disabled	.87		-.18	.87		-.18	.80		-.28
Not in the labor force	1.47	*	1.82	1.47	#	1.82	1.44	#	1.74
Unemployed	.85		-.44	.85		-.44	.84		-.49
Other	6.93	***	3.20	6.92	***	3.19	6.71	***	3.21
Unobserved	.32		-1.07	.32		-1.07	.33		-1.06
Education (general secondary degree)									
University	.68	*	-2.04	.68	*	-2.04	.68	*	-2.05
Specialized secondary	.95		-.32	.95		-.33	.96		-.28
Lower vocational	1.13		.69	1.13		.69	1.14		.74
Less than secondary	1.30		.66	1.30		.66	1.31		.68
Age at first birth	.93	***	-5.12	.93	***	-5.12	.93	***	-5.04
Time since first birth									
Months	1.03	*	2.43	1.03	**	2.95	1.03	***	3.42
Months ² /100	.95	**	-2.61	.95	**	-2.96	.95	***	-3.29
Months ³ /10000	1.02	*	2.31	1.02	*	2.52	1.02	**	2.78
Period (Late transition, 1996-2000)									
Late Soviet (1985-89)	2.79	***	6.82	2.79	***	6.83	2.82	***	6.92
Early transition (1990-95)	1.35	*	2.11	1.35	*	2.11	1.35	*	2.12
Constant	.01	***	10.69	.01	***	12.02	.01	***	12.22
Log likelihood	-2033.85			-2033.86			-2034.90		
Df	25			22			19		
N (women/person-months)	175218 (1011)			175218 (1011)			175218 (1011)		

Note: #p<.10 *p<.05 **p<.01 ***p<.001; ^{A,B} Estimates constrained to be equal.