

Where is the Motherhood Penalty? Dynamics of Personal Income in the Years Preceding and Following Childbirth among Russian Women¹

Many empirical studies of women's employment and wages disclose such thing as the motherhood penalty — the gap in wages between women with children and childless ones which cannot be fully explained by demographic, social or family characteristics (Harkness & Waldfogel 1999, Lundberg & Rose 2000, Pal & Waldfogel 2016, and others). The motherhood penalty might be partially generated by employers expecting lower productivity and mobility or frequent absence due to child healthcare or schooling, and therefore discriminating women with children while hiring or assigning wages. Apart from that, there might be selection of less career-oriented women into motherhood (Wetzels & Zorlu 2003, Pal & Waldfogel 2016), and women with children might actually be less productive at work compared to their childless colleagues due to higher burden of family- and housework.

Existing studies reveal relatively high motherhood penalty in Russia: the difference in wages of women with children and their childless compatriots comprised nearly 8% in 2003-2005 (Arzhenovskiy & Artamonova 2007). This gap is also observed in respect of total income, which includes wages, various social benefits, pensions and compensations, interest income and other revenues. According to our rough estimates on the nationally representative 2014 Russian Longitudinal Monitoring Survey (RLMS)² sample, both wage and income gaps between childless women and women with children preserve up to their late thirties (see Fig. 1). Within this period, in relative terms wage gap grows from 10% for the youngest women up to 19% for those aged 30-35, while income gap goes down from 12 to 5%.

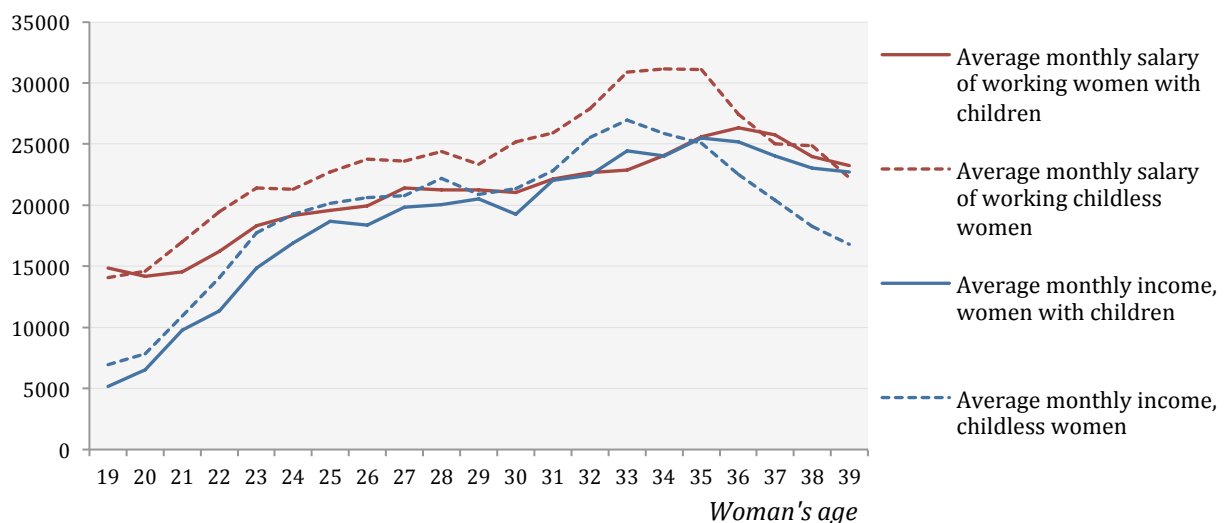


Figure 1. Average monthly salary and average personal income of women with children and childless women in 2014, in rubles

What generates the observed gap? The hypothesis of this study is that in Russia these differences in average indicators should be primarily attributed to the temporary income loss in several years following the childbirth rather than to the systematic lifelong discrimination at the labor market. Within this paper we focus on the income dynamics to

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² <https://www.hse.ru/en/rlms/>

account for possible replacement of labor earnings with other types of revenues and to evaluate the net effect of childbearing on women's income level. A separate analysis of the wage dynamics is another case of this research project.

To validate the hypothesis we use 15 waves of the mentioned above Russian Longitudinal Monitoring Survey conducted in 2000-2014. Basing on this data we constructed eight panel samples, each covering eight years of observation (2000-2007, 2001-2008, ... 2007-2014). We then subsampled women aged 18-44 during the whole eight-year-long period from each of the panels and pooled these subsamples. To estimate the motherhood penalty within the pooled dataset we reevaluated all the incomes referring to different calendar years in the prices of the year 2000 using the official data on the annual average consumer price indices.

As the size of the motherhood penalty is expected to vary significantly by the duration of the woman's absence from labor market (Aisenbrey, Evertsson & Grunow 2009), we treat the latter as one of the defining parameters in our analysis. Under the Russian legislation, all women are entitled to the 1.5 years-long paid childcare leave with protected job position followed by another 1.5 years-long unpaid leave with continuing job protection. In practice, many Russian women take a time-out even longer than 3 years, successively going on the leave for the next child or losing their job positions. Therefore, the descriptive analysis of the income dynamics was performed across 8 groups of women; 6 focus groups of women who had their children born within the observation period were contrasted to two groups of women who had not. These groups were identified as follows:

- a. A birth occurred only in the third year of observation, and a woman used a long childcare leave (2.5 years or longer) – 116 women;
- b. A birth occurred only in the third year of observation, and a woman used a short childcare leave (less than 2.5 years) – 213 women;
- c. A birth occurred in the third year of observation, no control for births in other years, and a woman used a long childcare leave (2.5 years or longer) – 160 women;
- d. A birth occurred in the third year of observation, no control for births in other years, and a woman used a short childcare leave (less than 2.5 years) – 287 women;
- e. No births within the observation period, women with children – 2,334 women (control group 1);
- f. No births within the observation period, childless women – 1,003 women (control group 2).

To partially eliminate influence of the net differences occurring due to selection into motherhood we shift to descriptive analysis in relative terms and compare women's personal income in each year with their income in the first observation period (compare Fig. 2a, b).

In the years preceding the birth, income of women planning to have a child increases with a higher rate compared to those from control groups. At that the most significant growth is observed among women using only short childcare leave later on, which confirms presence of selectivity into each of the followed groups. **The most dramatic and persisting reduction in income refers to women prone to use longer childcare leaves;** their relative income reaches its minimum at the fifth year of observation, i.e. by the time their children reach the age of 2. In the same year average relative income of women coming out of a short childcare leave reaches the level of those observed for the control group 1 (no births, women with children). Apart from that, **by the eighth year of observation (or by the child's fifth birthday) the gap in relative income of women using short and long childcare leave almost completely vanishes.**

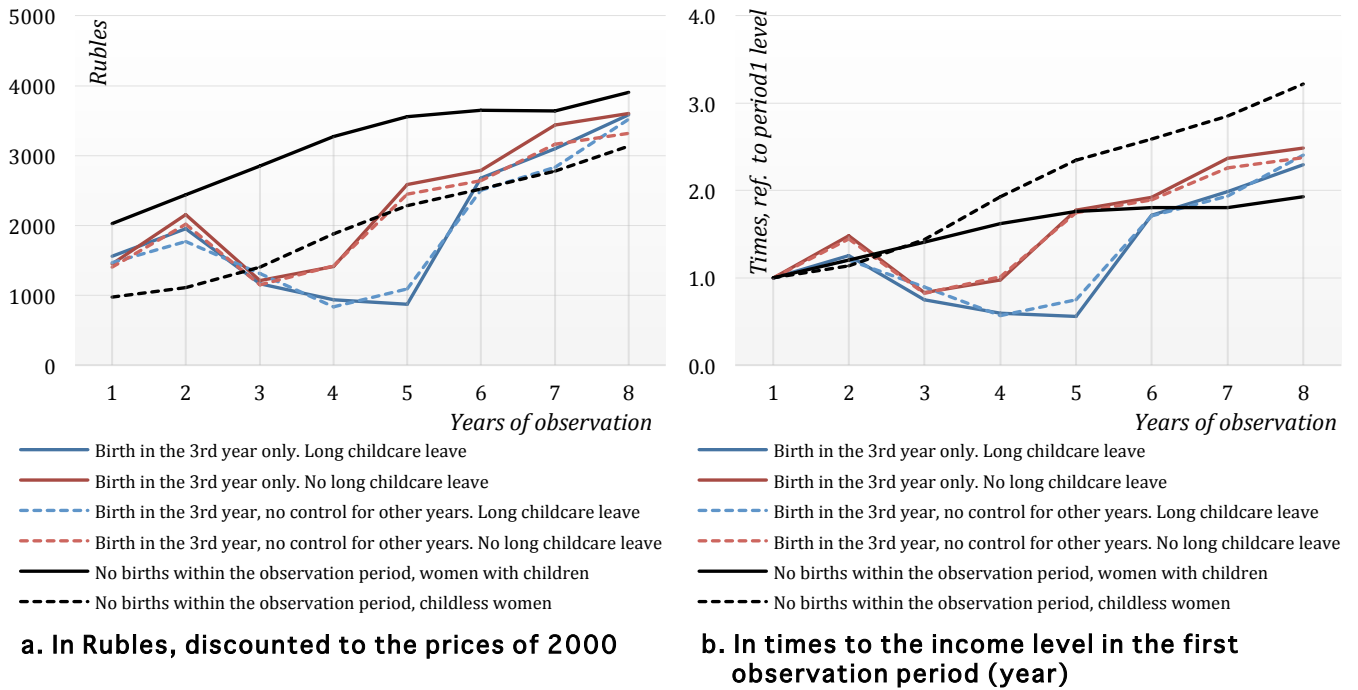


Figure 2. Dynamics of women's personal income in the years preceding and following the childbirth

We observe some variation in income dynamics across educational groups, and the most peculiar findings relate to the high-educated women. Remarkably, **high-educated women who had their child born within the observation period and used only a short childcare leave almost outpace their childless compatriots by the level of relative income by the 8th year.** However, **high-educated women using a longer childcare leave carry their penalty beyond the observation period** (Fig 3). Apparently, for this group of women, the long dropouts from employment have the strongest long-term negative effect.

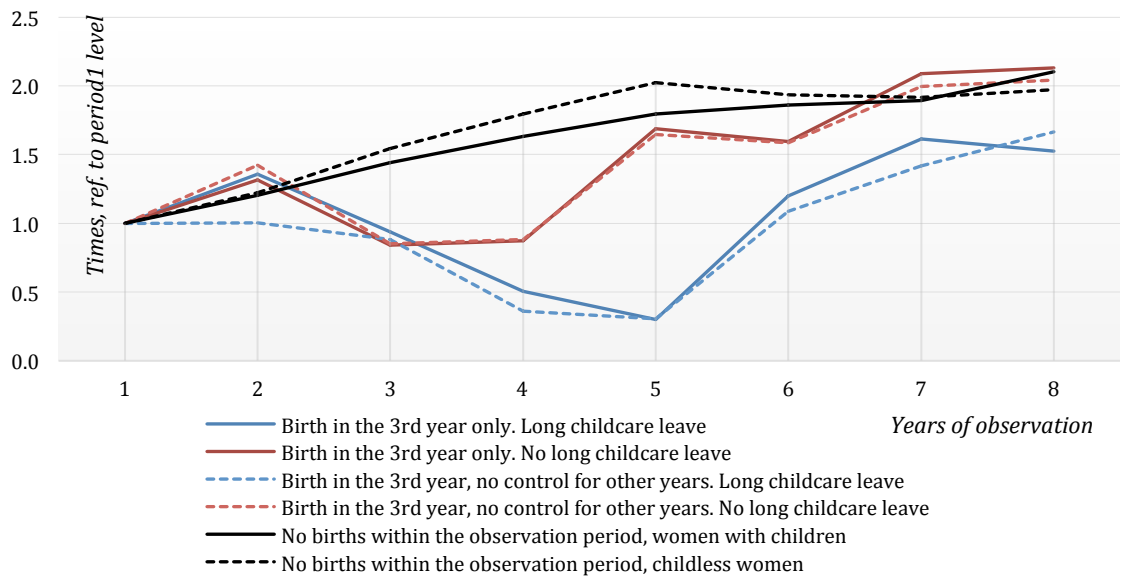


Figure 3. Dynamics of personal income of women with higher education in the years preceding and following the childbirth, times to the income level in the first observational period (year)

This research is in progress. In the coming months we plan to reshape the control groups to match the age structure of women in the groups of interest more accurately and to check if the differences in descriptive statistics persist in the same scope then. To confirm the influence of length of the used childcare leave combined with the woman's education level on the following income dynamics and duration of the motherhood penalty appearance we plan to estimate a set of dynamic panel data models. We will also check the capability of the RLMS data to follow the income dynamics on a longer interval using the same method, and then try to estimate the gross lifelong losses in personal incomes associated with childbearing.

References

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