Impact of reduced military service on the demand for higher education

We analyze the effect of the 2007-2008 army reform in Russia, according to which the period of compulsory military service was reduced from two years to one year. The research question is to evaluate the effect of the reform on the demand for higher education. We use data from the Russian Monitoring of Economic Situation and Population Health (RLMS HSE).

A number of studies that analyze the impact of conscription on the demand for education have found that conscription reduces the demand for education, while abolishing of conscription increases (Keller et al. 2010, Hubers and Webbink 2015, Buonanno 2006, Cipollone & Rosolia 2007). Other studies indicate that abolishing of compulsory military service does not have a statistically significant effect on the university enrollment rate (e.g. Di Pietro 2013).

The impact of military service in Russia was investigated by Card & Yakovlev (2014), who examined the impact of conscription in the Russian army on health and bad habits. Dong Y. (2017) found that conscription had a significant negative effect on the earnings of those who served in the military. In addition, Dong Y. (2017) found that military service significantly reduces the likelihood of obtaining higher education in Russia. Ratnikova, Kopytok (2019) showed that conscript service does not affect subsequent income.

In the context of our research, it is important to note that university students are often fully or partially exempted from the military draft. In fact, in Russia there are alternative ways constituted in the Soviet period: either university enrollment or serving in the army. Since university enrollment rate is higher for an applicant from families with high incomes and educated parents (Prakhov, 2016; Prakhov & Yudkevich, 2019), the likelihood of serving in the army is significantly higher for young men from low-income families living in rural areas or families with a low level of education of the parents (Mitrofanova & Artamonova, 2015; Lokshin & Yemtsov, 2008). That is, it is not the conscription into the army that plays a role in the demand for higher education, but the process of selecting young people into the groups of students and army draftees.

To avoid the problem of self-selection in evaluating the effect of the army reform on the demand for higher education, we use the triple differenced difference (DDD) method. The same design is implemented to study the demand for education among the army draftees in several papers (France: Maurin & Xenogiani 2007, Italy: Di Pietro 2009, Turkey: Torun & Tumen 2016). Male individuals of a certain year of birth affected and not affected by the reform, who served in the army, are considered as the treated group. The control group consists of women of the same year of birth and men who did not serve in the army.

The DDD model is shown below:

$$y_i = \alpha + \beta_1 Male_i + \delta_1 Male_i \cdot Cohort_i + \beta_2 Army_i + \delta_2 Army_i \cdot Cohort_i +$$
$$+ \eta_1 EduMom_{1i} + \eta_2 EduMom_{2i} + Region_i + \gamma_i + \varepsilon_i$$

where Male = 1 for men and 0 – for women; Cohort is a dummy variable that takes 1 for those born in 1990 and later and 0 for those born in 1980 and earlier. *EduMom* - mother's education (0 - below secondary - basic category, 1 - secondary, 2 - university). γ and *Region* are fixed effects by year of birth. δ_1 is responsible for the effect of the reform on all men in comparison with the control group of women, and δ_2 is responsible for the additional effect of the reform on those who served in the army.

DDD estimates take into account the differences in the demand for higher education for serving and non-serving men, depending on the age cohort, and the additional effect for those who served after the reform, including women as a control group. Estimates indicate a decrease in the demand for university education

among men serving in the army after the reform by 18.1-19.7% in the groups of 24-25-year-olds and by 19.4-30.9% in the group of 23-year-olds. At the same time, the effect of the reform for men, regardless of serving for the army, although negative in sign, is insignificant in all specifications. A mother's higher education increases the child's chances of getting university education by 28.9-40.1%, and secondary education – by 11.6-19.6%. The estimates show a higher demand for education in a post-reform group of individuals irrespective of gender by 10.2-24.8%.

We conclude that the reform had a demotivating effect on men who served in the army after the reform and did not have an effect on those who did not serve in the army. The decline in the attractiveness of higher education for served in the army individuals can be explained by other socio-economic processes that were taking place after the year of reform. In p articular, the growth of wages in law enforcement and military institutions, where army men are employed more often might have an effect.