

Intergeneration Educational Mobility in Russia and the USSR

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Abstracts

The objective of this paper is to estimate the factors of intergeneration educational mobility in Russia and Soviet Union, that is to test the equality in accessing the continuation of education at the next level for children from different social groups (families with various levels of the family capital), estimated for different cohorts. The data source is Russian Longitudinal Monitoring Survey (RLMS-HSE) in 2006-11. There are panel data collected in 1994-2011. The sample is representative for Russia population as a whole. In 2006 there were some questions about respondent parents, that allow us to test if there is the dependence between educational level of respondent and some parameters of his/her parents, including their educational level, Communist Party membership and several other.

We estimated the model of probability to get the education of the given level depending on gender, age, nationality, characteristics of parents and birthplace for Russian people born in 1946-1990. Data about respondents' education are collected in 2006-11, about their parents - in 2006. The method of this model estimation is multinomial regression. The model was estimated for the pooled sample, as well as for three cohorts separately: born in 1946-60, 1961-75, 1976-90. It was found out that the family capital (first of all, the educational level of parents and urbanization level) represent an essential obstacle for educational opportunities of Russian high schools graduates. Regression estimation for the pooled sample demonstrates the significant level of dependence of respondents' education on that of their parents.

The main conclusion is that the inequity in access to professional education was strong for all three cohorts. The following factors have positive impact on the child's chances of having educational level lower than university diploma: parents' human capital is low; respondent was born in a village; father wasn't a member of the Communist Party of the USSR; respondent's gender is male (excluding secondary professional education). The inequity in accessing professional education was strong for cohorts born in 1946-60 as well as in 1976-90. Parents' human capital always had the greatest effect on educational chances compared to all other factors.

The negative impact of parents' low human capital was stronger for younger cohort (born in 1976-90) than for the older one (born in 1946-60). That is why although the absolute accessibility of professional education in modern Russia increased, the relative accessibility of professional education (i.e. their dependence on parents' education) decreased. The intergenerational educational mobility (percentage of children who are more educated than their parents) decreased.

Keywords: education, intergenerational mobility, educational chances
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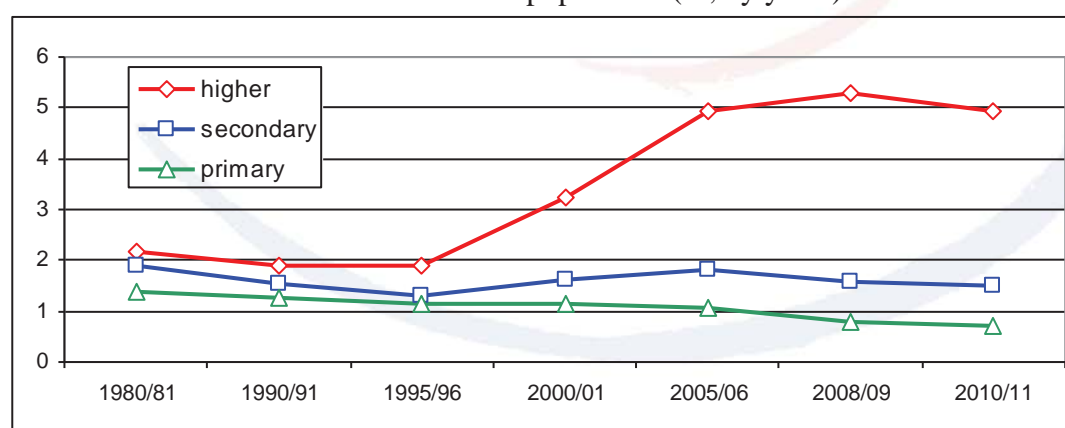
1. Introduction

During the last 10 years the problem of the accessibility of education in Russia has attracted an increasing attention of researchers and policymakers. It is believed that high educational level of the population, on the one hand, increases the economic potential of the society, and on the other hand it raises the well-being of people, their social status, helps to overcome inequality. However, education could be a factor of social mobility only if children of poorer and low educated parents have the opportunity to get education and income higher than those of their parents. Some problems in education have become more transparent in post communist Russia thanks to the social structures demolition and the intensive mobility of people in the social hierarchy. Besides, in the middle of the 1990s the dependence of incomes on educational level decreased, some social strata with high level of education but low incomes have appeared, rate of returns on the "old" (soviet) and "new" (post-soviet) education are different.

Besides, during the last 15 years the number of students and their proportion in Russian population has grown, which promotes the absolute accessibility to education. This happened mostly due to the investments into education made by the population but not by the government. Thus, the number of students who pay for their education has grown and in 2003 their percentage reached 50% of those who have entered Universities that year. It seems natural that fees for education raise the educational accessibility for rich and reduce it for poor families. Certainly, besides incomes, many other factors can influence the probability to obtain a particular level of education for a boy or a girl – their success in school, quality of training in school, parents' education, social networks of family, urbanization level, etc.

Since the end of the 1990s Russia has seen the boom in demand for higher education. Between 1995/96 and 2009/10 academic years the number of students in Universities has grown from 2,7 to 7 millions, in professional colleges (secondary professional education) from 1,9 to 2,1 millions, and in vocational schools (primary professional education) has fallen from 1,7 to 1 millions.¹ We should note that the decrease in birth rate in Russia started only after 1991 and it has not affected the cohorts who entered schools of professional education in 1995-2005. Thus, the percentage of students (at all levels of professional education) in Russian population was 4,3% in 1995/96 and 7,1% in 2010/11 (figure 1).

Figure 1. Percentage of students (higher, secondary and primary professional education) in the Russian population (% , by years)



Sources: Russian Federal State Statistic Service - RFSSS.

So, we can conclude that the absolute accessibility of professional education has grown in comparison to 1991, first of all thanks to the increase in the overall number of students in

¹ Russian Federal State Statistic Service - RFSSS

<http://www.gks.ru/wps/wcm/connect/rosstat/rosstatsite.eng/figures/education/>

Universities. At the same time, since this growth is mostly explained by increase in the enrollment of students whose tuition is not paid by the government, the accessibility of professional education for poor groups of the population should have decreased. As Konstantinovskiy (1999) has shown, there was a considerable social differentiation in the Soviet Union in professional education accessibility (first of all in the higher education) which has even grown in the middle of the 1990s. Children who have graduated from schools in small towns and villages, and children whose parents were workers or agricultural workers had less opportunity for get higher education. Similar results were found by Cherednichenko (2004) for 1998-2001, and by Roshchina (2005) for 2000-2004.

Despite the variety of recent works on inequality in education in Russia we still have no good reason for saying whether professional education nowadays strengthens social inequality or helps to alleviate it. The other question is whether the intergenerational educational mobility is higher in modern Russia than it was in the former Soviet Union.

The research objective of this paper is an estimation of intergenerational educational mobility in Russia for 3 cohorts: born in 1946-60, 1960-75, 1976-90 (or, in other words, an estimation of the equality in access to an extra level of education for children from families with different levels of parents' education).

2. Theoretical background

The high educational level of the population is a blessing for a society. First, education is one of the tools of the economic growth due to the increase in scientific and technical potential of people. Second, any increase in the educational level causes income growth which is the factor of increase in a consumer demand and thus it would be an accelerator of the economy. Third, education is one of the few channels of ascending social mobility.

That is why the question of equality in access to education and of equity in education in general is very important. The absence of equal access to education means growing of an economic, social and cultural inequality, closing a way into the top class for people from the bottom strata of the society. To estimate whether there is some unjust inequity in education it is necessary to find factors of this inequality. As a rule, inequality is considered as equitable if it is the consequence of unequal efforts and abilities of people. On the contrary, if the inequality of chances is due to the differences in social status, incomes, gender, race, etc., it is judged by society as unjust.

From the point of view of the economic theory, education is an investment into the human capital (Becker, 1964; Mincer, 1958). People decide to invest because they expect a certain return to this investment in human capital due to the future increase in their productivity and incomes. When an individual is choosing the amount of this investment he/she compares this expected return with direct and opportunity costs (the first should be higher). According to Becker's hypothesis the amounts of investments in the children human capital differ because of the differences in families' resources (money, time, human capital of parents). The income influences investments in education of children positively, while the number of children – negatively. The higher the human capital of parents is, the more knowledge and skills they can pass to their children, the more is the investment of parents into the human capital of children. Thus, the social differentiation in education is influenced by the differences of students' families in their families' capitals.

The theoretical explanation of dependence of children income, education and status from those of their parents were proposed by Becker and Tomes (1979, 1986) using the idea of the allocation of resources within the family. First of all children have to do some investment in human capital facing the borrowing constraints. Second, parents' educational level influences the skills and knowledge of children and their ability to produce incomes. The other source of ideas about social (including educational) mobility are sociological researches of Sorokin (1927) and Goldthorpe (1992).

In the theoretical model of Becker and Tomes (1979, 1986) the intergenerational income mobility is modeled as follows:

$$\ln Y_{i,t} = \beta_0 + \beta_1 \ln Y_{i,t-1} + \beta_2 X_{i,t-1} + \varepsilon_{i,t}$$

where t is index of the generation and i is index of the family, β_0 is the average income of the children in generation t and $Y_{i,t}$ is the children's income (when they are adults), $Y_{i,t-1}$ is the income of parents (generation $t-1$), $X_{i,t-1}$ is the vector of control variables, and $\varepsilon_{i,t}$ is unobserved components. Here β_1 measures the relation between the income of individuals and the income of their parents.

The same model is used to measure the correlation between education levels (it could be measured by years of schooling), occupational status, social status of children and of their parents. It can be interpreted as an estimation of inequality in education, if the educational level of child depends on family capital, including parents' education. Intergenerational mobility is higher if the link between probability to get a diploma and the social factors is weaker. At the same time the higher is the percent of educated people the lower could be level of ascending intergenerational mobility in the future.

Empirical research of Jencks *et al.* (1972), Featherman and Hauser (1978), Mare (1981, 2001) have shown the high level of dependence between education and incomes of children and their parents. Intergenerational mobility during the last 30 years was studied in different countries: by Atkinson (1981) and Atkinson, Maynard and Trinder (1983), Dearden *et al.* (1997) in the UK; by Rauum *et al.* (2003, 2005) in Norway; by Checchi and Flabbi (2005) in Italy; by Card (2005) in the USA. Solon (1999) made the review of the intergenerational mobility in the labor market; d'Addio (2007) has found some evidence for the OECD Countries in intergenerational transmission of disadvantage.

Empirical research analyzed the probability of the transition to the next educational level in different countries in the context of family status and social factors: an educational level of parents, cultural level of a family, parents' occupation and so forth. Robert and Bukodi (2000) have carried out research on data for Hungary, De Graaf (1988) for Germany, De Graaf (1986) for the Netherlands, Sin-Kwonk (1998) for Czechoslovakia. Comparisons between some countries have been made by Shavit and Blossfeld (1993) and Rijken and Ganzeboom (2000). Results have shown that social origin influence becomes much lower with the increase of the educational level; the inequality in the access to education decreased throughout the 20th century. Konstantinovskiy (1999) was among the first to analyze the inequality of the access to education in Russia and the former USSR. He studied educational plans of pupils in high school, their relation with families' characteristics, estimated the dependence of chances to be enrolled in higher school on social origin. Some projects of Independent institute of the social policy were devoted to the analysis of inequality in the higher education in Russia (Roshchina, 2005). The high dependence of social status of children on those of their parents' was found by Burlutskay (2000) and Reutova (2004) for Russia and by Oksamitnaya (1999) for Ukraine.

3. Research methodology and database

The model tests the probability to get the education of a given level depending on parents' education and some other variables. The main tool of the analysis is regression estimation. In this model the dependent variable is the probability of a child to obtain a certain educational level (or to be studying at this level of education). The dependent variable measures the educational level of a respondent (has the Diploma or is studying now) and has 5 levels:

- University (base outcome);
- Secondary professional school;
- Primary professional school;

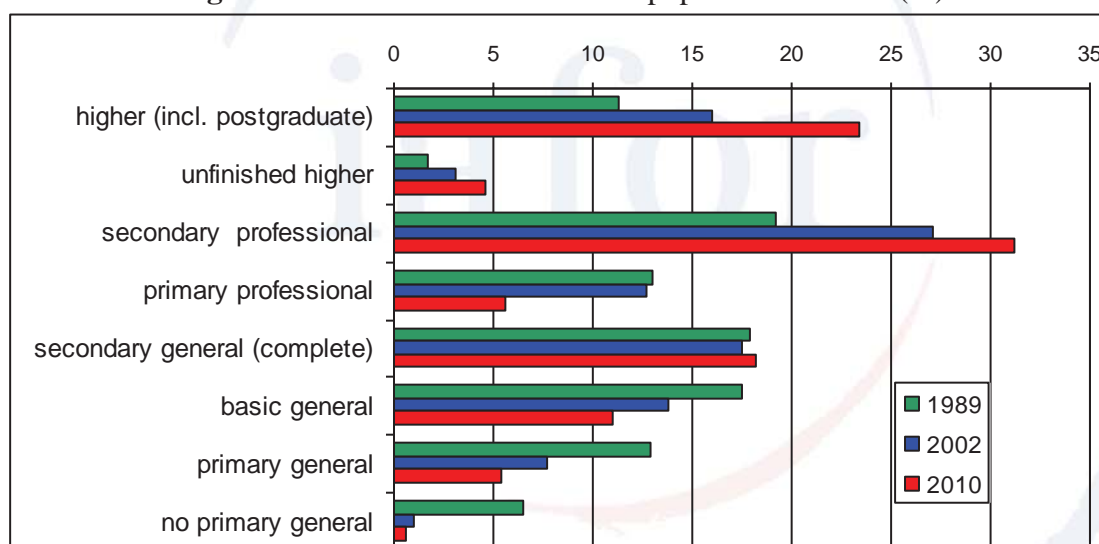
- High school;
- No high school diploma.

Independent variables are characteristics of a respondent (gender, age, place of birth, ethnicity) and of his/her parents (educational level, professional status, Communist Party membership) when respondent was 15. The data source is Russian Longitudinal Monitoring Survey (RLMS-HSE)² in 2006-2011. The main data about respondents and their parents were collected in 2006, but the information about respondents' education was found in all following rounds due to the panel nature of data. The sample of RLMS-HSE is representative for the Russian population as a whole.

4. Stylized facts

During the past 20 years the educational level of the Russian population has significantly increased. According to Russian population census of 1989 only 45,2% of people had diploma on some professional education (including 11,3 % - university diploma or unfinished higher education), and the educational level of 19,4% was only high school or even lower. By 2010 the percentage of people who has graduated from professional school has grown to 64,8 % (including 28% - University diploma), and the percentage of those who had an educational level of primary school and less has declined to 6 % (figure 2).

Figure 2. Educational attainment of population over 15 (%)



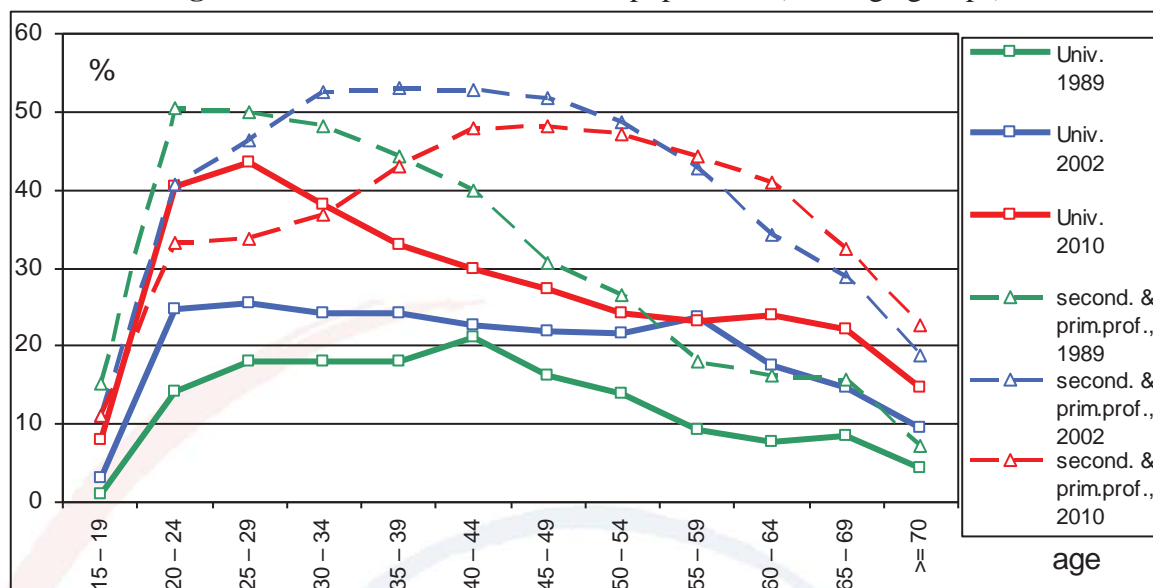
Sources: *Population censuses data*, Russian Federal State Statistic Service - RFSSS.³

The comparison of profiles age-education for 1989, 2002 and 2010 shows a solid growth of the proportion of population with primary and secondary professional education of the cohort over 35. These profiles also imply that the educational level of the cohort over 50 is significantly lower. The percentage of people with higher or unfinished higher education of all ages has grown by 1,3 – 1,8 times, and for the people older than 55 – by 1,8 – 2,6 times (figure 3).

² «The Russia Longitudinal Monitoring Survey (RLMS-HSE)» is conducted by National Research University - Higher school of economics and research center "Demoscope" with the participation the Carolina Population Center at the University of North Carolina at Chapel Hill and Institute of Sociology, Russian Academy of Sciences. (See <http://www.hse.ru/rlms>, <http://www.cpc.unc.edu/projects/rlms>)».

³ http://www.gks.ru/free_doc/new_site/perepis2010/croc/perepis_itogi1612.htm

Figure 3. Educational attainment of population (% of age groups)



Sources: *Population censuses data*, Russian Federal State Statistic Service - RFSSS. ⁴

As it was mentioned above, in Russia in 1995-2010 there was a restructuring of professional education. Between 1996 and 2010 the number of Universities has grown by 1,5 time, and the number of their students – by 2,5 times. The percentage of students in higher schools among all students of the professional education has grown from 43,5% to 69,2%, and the percentage of students in primary schools among all students of the professional education decreased from 26,4% to 9,9%.⁵

RLMS-HSE data demonstrate similar dynamics. In 1994 among all respondents of the age over 15 only 16,7% had university diploma, 39,8% - primary professional or secondary professional education diploma, and 43,5% - the high school diploma or lower. However in 2010 these figures have grown to 25,5%, 37,4% and 37,1% accordingly. The survey also confirms the conclusion based on the RFSSS (Russian Federal State Statistic Service) data: the educational level in the older age groups is significantly lower (table 1 in Appendix).

Thus, it is quite obvious that during the recent 15 years the absolute accessibility of education (mainly of higher education) has grown. However it should be pointed out that here the absolute accessibility is considered as chances of an individual to enter the professional school that depends directly on the increased relative capacities of the universities and other educational institutions (ratio of number of places to number of the young of corresponding age). But such a concept of accessibility seems to be too simplified. As it was argued above, the inequality in access to education of a certain level is due to differentiation between individuals (excluding his/her own abilities and effort) and to social and economic distinction between their families. Therefore, the rise in the number of students because of the enrollment of those who pay tuition fees themselves (as opposed to government-paid spots) can increase accessibility of education only for rich social groups, but not for the whole population.

The high correlation between parents' educational levels and those of their children confirm the hypothesis that the strong inequality in the accessibility to education is still present. The RLMS-HSE data for the year 2006 contain information on parents' level of education when respondent was 15. The other questions were about whether respondent's parents were members of the Soviet Union Communist Party before 1991. Under socialism in Russia and in some other countries of Eastern Europe parents' membership in the Communist Party was a substantial part

⁴ http://www.gks.ru/free_doc/new_site/perepis2010/croc/perepis_itogi1612.htm

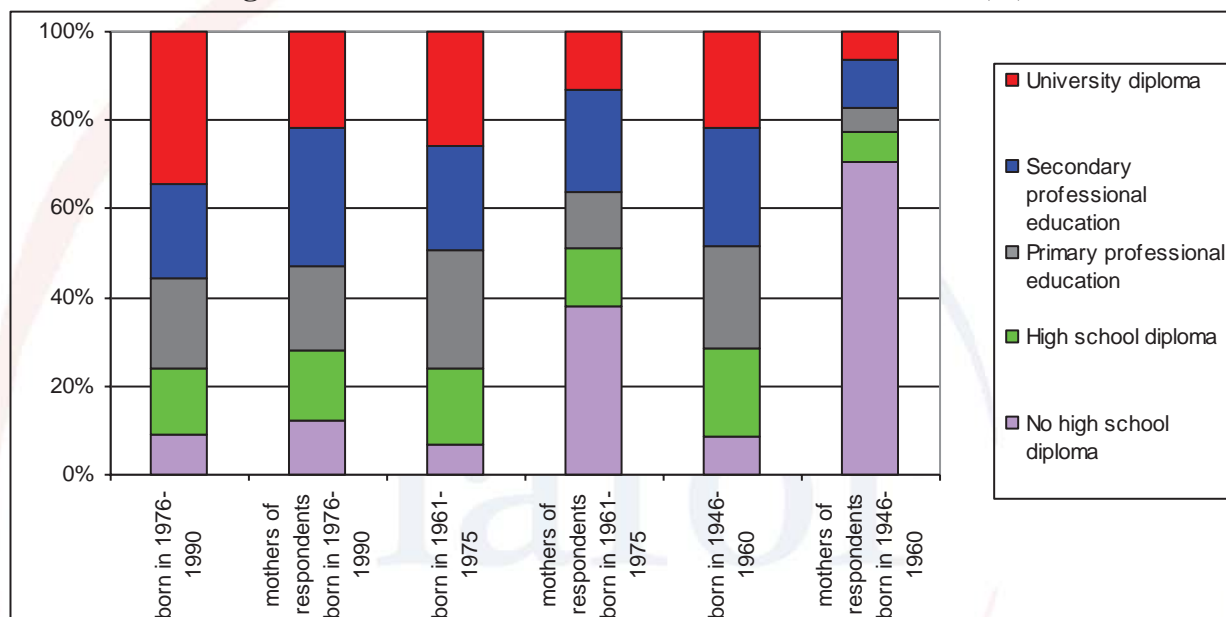
⁵ Russian Federal State Statistic Service - RFSSS

<http://www.gks.ru/wps/wcm/connect/rosstat/rosstatsite/main/population/education/>

of social capital, and several researches have shown that membership in the party was a significant factor of children's chances to obtain an university diploma.

According to the tables 1-2 in the Appendix, for the three given cohorts of Russian population in 2006-2011 we can see the strong dependence of the educational level of a respondent on parents' education. Thus, among all respondents born in 1946-60 only 22% have graduated from a higher school. But the percentage of children born in 1946-60 with higher education rose to 67,4% if mother had an university diploma, to 40,4% if she had secondary professional education, and to 31,1% if she had the high school diploma. Therefore, for those who were born in 1946-1960, any next level of parents' education, in comparison with unfinished high school, raised chances of a child to have university diploma (see table 2 in the Appendix).

Figure 4. Educational level of cohorts and of their mothers (%).



Sources: RLMS-HSE 2006-11. Computations from the author.

In contrast, for cohorts born in 1961-1975 and in 1976-1990 only secondary or higher professional education of parents did have positive influence on the probability for a child to be enrolled into a University. For those whose father or mother had diploma of primary professional school, of high school or lower, this probability was smaller, than for the whole population (table 1 and 2). This implies that since the second half of the 1970s, educational mobility has decreased: it became more difficult for children from families with lower level of education to move to a more educated group. The strengthening of educational inequality is also confirmed by the evidence that in two older cohorts only about 10% of children, whose parents had no high education, got the same level of education, and in younger cohort this share is 25%.

As fig. 4 shows, the rising intergenerational educational mobility was lower for the younger cohorts. In some part it is due to the increased educational level of parents: the higher is the education the lower could be level of rising intergenerational mobility. So, 76,1% of children born in 1946-60 had the educational level higher than those of their mother, and only 42,5% of children born in 1976-90.

According to RLMS-HSE data the membership of parents in the Communist Party raised chances for their children to obtain higher education, but it didn't influence the access to other levels of professional education (see table 4 of the Appendix). For those who were born after 1976, the father's party status was more important than the mother's one. The educational chances always were worse for people born in villages. So, 29,1% of children born in 1946-60 in towns had university diploma and only 15,2% among those born in villages. For cohort born in 1976-90 the corresponding shares were 41,2% and 23,9%.

5. Regression estimation

Let us now estimate the model of probability to obtain the education of a given level depending on characteristics of individual and his/her parents for Russian people born in 1946-1990. Independent variables are:

- educational level of mother and father;
- whether mother and father were not members of Soviet Union Communist Party;
- whether respondent was born in the village;
- region where respondent was born;
- age of the parents when respondent was born;
- gender, age and ethnicity of respondent.

The method of this model estimation is a multinomial regression; base outcome is «respondent has university diploma or he/she is studying in university». Model was estimated for all three cohorts together (Appendix, table 4), and also for each cohort separately (Appendix, table 5).

Regression estimation for the whole sample demonstrates the significant level of dependence of respondent's education on his/her parents' one. If the father does not have high school diploma (in comparison with the case of father's University diploma), the probability for his child to obtain the secondary professional education is more than 2,7 time greater than to have university diploma; and the probability to not have any diploma is more than 7,7 time greater. If father's education is lower than secondary professional, it is most likely that his child would have primary professional education or would have no diploma. However, if father's education is secondary professional, the same level of the child's diploma is anticipated. This probability is more than 1,7 time greater than his child have higher education. So, the greater the father's human capital is the higher are chances of a child to be more educated. The same conclusion could be made about the influence of mother's education, but the impact of the latter is greater.

As the table 4 in the Appendix shows, the following factors have positive impact on the child's chances of having educational level lower than university diploma:

- parents' human capital is low;
- the respondent was born in a village;
- father wasn't a member of the Communist Party of the USSR;
- respondent's gender is male (excluding secondary professional education).

In general, given all other factors equal, compared to the oldest cohorts, the chances of the younger cohort (especially born in 1976-90) of not having any educational certificate are higher, than having a university diploma. But there is no impact of the year of birth on the probability to have diploma of high school in comparison with the university diploma. We could find no influence of the region where the respondent was born, of mother's membership in the Communist Party, very low influence of parents' age, and only some impact of respondent's nationality (in general North Caucasians, Tatars and Bashkirs had better chances in education).

The general conclusion is that there was no equality in access to professional education in the USSR. The most serious barriers were small amount of parents' human capital and parents' political capital (Communist Party membership), and a village as the birthplace (that may appear as low cultural capital, low family income, worse training in high school, great distance to educational institutions, etc.). Unfortunately, there are no data about family incomes (when respondent were 15) and type of school where respondents had studied, as most research insist that these factors are very significant too.

Let's now see if there is a difference in factors of the accessibility in education between different periods of Russian history. We take three cohorts. The youngest one consists of respondents born in 1976-90. They turned 15 during 1991-2005, and so they could be the applicants in the schools of professional education (primary, secondary or higher) in the first decade of post-socialism. The people in the second cohort (born in 1961-75) turned 15 in 1976-90, so, we can measure the difference of chances at that époque of the late socialism. And respondents in the oldest cohort

(born in 1946-60) turned 15 in 1961-1975: this period is the earliest to test the issues of the inequality of educational chances in the USSR (see table 5 in Appendix).

As regressions estimations show during all three periods people suffered from inequality in access to professional education (as there are significant coefficients in all models). Parents' human capital always had the strongest effect on educational chances. But the negative impact of its' low volume as a rule increased from the earlier period (1961-1975) to following ones (1976-1990): for example the child born in 1946-60 whose mother had not any diploma had the chances to remain at the same educational level 6,2 times greater than to graduate from university; but for those who were born in 1961-1975 this ratio was 27,3. For the cohort born in 1976-90 the probability to have no diploma or to graduate from primary professional college if mother has primary or secondary professional education increases in comparison with the cohort born in 1946-60. At the same time father's human capital became more important for child's probability of having secondary professional education, but mother's one became less important. As a rule, the educational level of mother had stronger impact than the father's one.

The influence of respondent's gender is very high for all levels of education excluding secondary professional colleges (in comparison with University). Young men had more chances to remain without any diploma, or to have diploma of high school or of primary professional school than to graduate from the university. Their access to secondary or higher professional education was the highest for people born in 1946-60. Regressions estimation show that to be born in a village resulted in great probability to remain without any professional education for the oldest and the youngest cohort. But the chances to obtain some professional education were the best for those who were born in 1961-75.

As data show if father was not a member of the Communist Party in the Soviet period his child (born in 1946-60 or in 1976-90) had more chances to not have any diploma or to have the high school diploma. There was no dependence of the probability to enter in secondary professional school in comparison with the university from father membership in the Communist Party or in all periods. And the influence of father membership in the Communist Party was the lowest for the cohort born in 1961-75. As data show, 56,7% of the children born in 1976-90 whose fathers were the members of the Soviet Union Communist Party obtained university diploma, and only 32,1% of the same cohort whose fathers were not Party members (Appendix, table 3). The corresponding percentages for people born in 1961-75 were 39,7% and 22,5%. This fact let us conclude that the political capital of parents (Soviet Union Communist Party membership) were transformed in their social and human capital and had positive influence on educational chances of children even after the USSR liquidation.

There is some influence of respondent's nationality and of his\her place of birth on professional education accessibility, but it isn't strong (not significant for most of dummies).

6. Conclusion

The main conclusion is that the inequity in access to professional education was strong for all three cohorts. RLMS-HSE data demonstrate that factors of the family capital (first of all an educational level of parents) represent an essential barrier of educational opportunities of high schools graduates. The existing social inequality of children's families is fixed in high school as children of poorer and less educated parents, as a rule, study at bad schools and are less successful in education. Parents' human capital always had the greatest effect on educational chances among all other factors.

The negative impact of parents' low human capital was stronger for younger cohort (born in 1976-90) than for the older one (born in 1946-60). That is why although the absolute accessibility of professional education in modern Russia increased, the relative accessibility of professional education (i.e. their dependence on parents' education) decreased. The ascending intergenerational educational mobility became lower.

Today the system of the Russian professional education is, to the great extent, the mechanism of fastening the existing social inequality rather than of social mobility. Students of the primary professional education are children who have graduated from bad schools, whose parents have a low social status; they have humble expectations about their future employment. Students of the universities are children of parents with a high social status; they graduated from much better schools, and have aspirations about their future job. Students of the secondary professional education were raised in the families with the moderate social positions, they graduated from medium range schools, their plans for the near future are connected with universities enrollment rather than with work-related issues.

Thus, in the Russian social hierarchy the primary professional schools and the universities represent the bottom and the top levels where it is possible to move aside, but not upwards, on other words, they allow only horizontal social mobility. Moreover, only the secondary professional schools look like a ladder to the next «social level» giving their students the possibility to be enrolled in the universities and then to get good employment.

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Appendix.

Table 1. Education of respondents, their fathers and mothers by cohorts, Vert% (RLMS, 2006-11)

	Respondents year of birth			Total
	1976-90	1961-75	1946-60	
<i>Education of the respondent</i>				
No high school diploma and not studying now	9,2	6,8	8,5	8,2
High school diploma	14,9	17,4	20,0	17,3
Primary professional education (studying now or has the diploma)	20,4	26,4	23,3	23,3
Secondary professional education (studying now or has the diploma)	20,9	23,6	26,3	23,5
University (studying now or has the diploma)	34,6	25,8	21,9	27,7
<i>Education of father when a respondent was 15</i>				
No high school diploma	17,5	41,1	69,3	40,6
High school diploma	15,7	10,3	4,1	10,5
Primary professional education	28,1	18,2	9,2	19,2
Secondary professional education	18,4	13,9	8,0	13,8
University diploma	20,3	16,5	9,4	15,8
<i>Education of mother when a respondent was 15</i>				
No high school diploma	12,4	38,0	70,7	38,2
High school diploma	15,8	12,9	6,7	12,1
Primary professional education	18,6	12,7	5,4	12,8
Secondary professional education	31,2	23,2	10,8	22,5
University diploma	21,9	13,0	6,4	14,4

Table 2. Respondents' and their mothers' education level by cohorts, Vert% (RLMS, 2006-11).

Cohorts	Educational level of respondent	Mother's education when the respondent was 15				
		No high school diploma	High school diploma	Prim.prof. education	Second.prof. education	University diploma
1976-90	No high school diploma	24,7	11,1	8,4	5,4	2,1
	High school diploma	15,3	20,4	16,2	12,2	11,2
	Primary prof.education	25,7	23,5	31,4	16,4	9,1
	Secondary prof.education	16,7	25,4	21,4	24,9	13,0
	University diploma	17,7	19,7	22,6	41,1	64,6
1961-75	No high school diploma	9,6	7,8	5,8	3,1	,8
	High school diploma	21,7	18,3	13,4	14,3	11,8
	Primary prof.education	32,5	26,9	33,2	20,4	8,9
	Secondary prof.education	23,3	25,5	24,7	27,7	16,6
	University diploma	12,9	21,5	23,0	34,5	61,8
1946-60	No high school diploma	10,6	2,7	3,4	1,3	2,3
	High school diploma	21,9	15,8	13,5	16,2	10,3

	Primary prof.education	26,7	14,8	25,0	11,4	7,4
	Secondary prof.education	26,1	35,5	31,8	30,6	12,6
	University diploma	14,7	31,1	26,4	40,4	67,4

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Table 3. Respondents' education depending on parents' membership in the Communist Party before 1991 and place of birth, by respondents' cohorts, Vert% (RLMS, 2006-11).

Respondent s' years of birth	Education of respondent	Father was member		Mother was member		Respondent was born in	
		no	yes	no	yes	town	village
1976-90	No high school diploma	9,6	3,7	9,4	6,0	6,9	13,4
	High school diploma	15,6	9,2	15,2	11,7	12,3	19,3
	Primary prof.education	21,1	13,7	20,2	17,3	19,3	22,2
	Secondary prof.education	21,6	16,7	21,2	16,6	20,3	21,2
	University diploma	32,1	56,7	34,0	48,4	41,2	23,9
1961-75	No high school diploma	7,4	3,3	6,7	5,9	5,8	8,3
	High school diploma	18,2	14,6	17,7	12,5	13,3	23,2
	Primary prof.education	27,6	20,2	26,6	21,6	25,2	28,5
	Secondary prof.education	24,3	22,2	23,8	24,5	24,9	21,8
	University diploma	22,5	39,7	25,2	35,5	30,8	18,2
1946-60	No high school diploma	9,6	4,0	8,8	4,0	5,9	11,0
	High school diploma	21,4	15,6	20,3	16,8	19,5	20,3
	Primary prof.education	25,3	16,6	23,4	17,3	18,7	27,4
	Secondary prof.education	26,1	27,9	26,6	24,8	26,9	26,1
	University diploma	17,6	35,8	20,9	37,1	29,1	15,2

Table 4. Multinomial logistic regression (rrr - relative-risk ratios, or exp(b); if $RRR < 1$, than $b < 0$), dependent variable is educational level of respondent. "Higher education (has the diploma or is studying in University now)" is the base outcome. Sample: Russian population born in 1946-1990. (RLMS-HSE, 2006-2011)

	No high school diploma	High school diploma	Primary professional education	Secondary professional education
<i>Dependent variable outcomes</i>				
<i>Years of birth (1946-60 is base outcome)</i>				
1976-90	2,440***	0,835	1,243*	0,711***
1961-75	1,521***	1,123	1,727***	1,048
Male	2,612***	2,617***	3,102***	1,075
<i>Ethnicity (Russian is base outcome)</i>				
Ukrainian, Byelorussian, Moldavian nationalities of the North Caucasus small nationalities of the Volga region and the North of Russia	0,801	0,522	0,972	0,588*
Tatars, Bashkirs	0,521**	1,854***	0,209***	0,700*
other	0,590	1,347	1,314	1,018
Father wasn't a member of the CPSU	0,431**	0,871	0,740	0,633**
Mother wasn't a member of the CPSU	1,246	1,114	0,643	0,979
Father's education (Higher education is base outcome)	1,953***	1,392***	1,291**	1,231**
No high school diploma	0,792	1,077	0,809	0,899
High school diploma	7,716***	3,741***	6,086***	2,750***
Primary professional education	3,943***	2,167***	3,526***	2,524***
Secondary professional education	4,752***	1,901***	4,060***	2,491***
Mother's education (Higher education is base outcome)	1,626	1,547***	1,564**	1,756***
No high school diploma	15,563***	3,490***	5,882***	3,916***
High school diploma	8,224***	3,185***	4,269***	3,808***
Primary professional education	5,252***	2,624***	4,907***	2,930***
Secondary professional education	2,771***	1,600***	2,011***	2,288***
Age of father at a birth of a respondent	0,986	0,978**	0,982*	1,006
Age of mother at a birth of a respondent	1,006	1,012	1,016	0,981*
Respondent was born in the village	2,008***	1,558***	1,482***	1,320***
<i>In what republic of USSR respondent was born (Russia is base outcome)</i>				
Ukraine, Belarus, Moldova	0,826	0,730	0,798	1,226
Transcaucasia	1,549	1,562	1,787	1,679
Baltic	1,198	2,816*	1,603	0,740
Asia	0,916	0,863	0,734	1,049
Other republic	0,000	0,188	0,291	0,475
Number of obs		6916		
LR chi2(104)		2221.54		
Prob > chi2		0.0000		
Pseudo R2		0.105		

*Coefficients' significance: *** - 1%, ** - 5%, * - 10%.*

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Table 5. Multinomial logistic regression (rrr - relative-risk ratios, or exp(b); if $RRR < 1$, than $b < 0$), dependent variable is educational level of respondent. "Higher education (has the diploma or is studying in University now)" is the base outcome. Sample: Russian population born in 1946-1990. (RLMS-HSE, 2006-2011). Regressions are made by cohorts.

	Born in 1976-90	Born in 1961-75	Born in 1946-60	Born in 1976-90	Born in 1961-75	Born in 1946-60
	No high school diploma			High school diploma		
Age	0,987	0,847***	1,083***	1,011	0,974	0,958**
Male	2,862***	3,536***	1,865***	2,789***	3,058***	2,120***
<i>Ethnicity (Russian is base outcome)</i>						
Ukrainian, Byelorussian, Moldavian	4,820*	0,423	0,647	0,594	0,131**	1,408
nationalities of the North Caucasus	0,283**	0,441	1,226	1,869**	1,792*	1,583
small nationalities of the Volga region and the North of Russia	0,559	0,320	1,108	0,692	0,978	2,274**
Tatars, Bashkirs	0,282	0,601	0,695	0,617	1,311	0,838
other	1,117	1,317	0,818	1,151	1,062	0,940
Father wasn't a member of the CPSU	1,851*	1,440	2,580***	1,710**	1,092	1,535**
Mother wasn't a member of the CPSU	0,925	0,668	0,888	0,981	1,157	1,069
<i>Father's education (Higher education is base outcome)</i>						
No high school diploma	7,240***	10,966***	6,877**	3,781***	3,752***	3,320***
High school diploma	3,869***	4,955**	3,158	2,452***	2,495***	1,231
Primary professional education	4,365***	9,256***	2,404	2,276***	1,992**	1,239
Secondary professional education	1,315	2,349	1,940	1,463	1,489	1,777*
<i>Mother's education (Higher education is base outcome)</i>						
No high school diploma	18,335***	27,333***	6,160**	2,216***	4,100***	4,291***
High school diploma	10,950***	10,033***	1,972	3,422***	2,779***	3,501***
Primary professional education	6,324***	4,796**	3,142	3,111***	2,245**	2,144
Secondary professional education	2,719**	3,491*	1,190	1,330	1,701**	2,061*
Age of father at a birth of a respondent	1,015	0,942**	0,980	0,990	0,963*	0,981
Age of mother at a birth of a respondent	0,995	1,004	1,039	1,007	1,003	1,026
Respondent was born in the village	2,486***	1,296	2,514***	1,836***	1,785***	1,206
<i>In what republic of URSS respondent was born (Russia is base outcome)</i>						
Ukraine, Belarus, Moldova	0,318	1,659	0,701	1,514	1,188	0,342**
Transcaucasia	4,095	1,008	1,657	2,738	1,418	1,613
Baltic	4,724	0,000	0,000	4,660	0,853	2,545
Asia	0,858	0,823	1,237	1,179	0,982	0,609
Other republic	0,000	0,000	0,000	0,000	0,000	0,787

<i>Number of obs</i>	2227	2419	2270
<i>LR chi2(100)</i>	817.14	863.58	725.75
<i>Prob > chi2</i>	0.000	0.000	0.000
<i>Pseudo R2</i>	0.124	0.118	0.104

*Coefficients' significance: *** - 1%, ** - 5%, * - 10%.*

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Table 5. Continued.

	Born in 1976-90	Born in 1961-75	Born in 1946-60	Born in 1976-90	Born in 1961-75	Born in 1946-60
	Primary professional education			Secondary professional education		
<i>Age</i>	1,005	0,992	0,939***	0,966**	1,006	0,979
<i>Male</i>	3,528***	2,849***	3,020***	1,351**	0,960	0,939
<i>Ethnicity (Russian is base outcome)</i>						
Ukrainian, Byelorussian, Moldavian	0,670	0,561	2,238	0,622	0,226***	1,081
nationalities of the North Caucasus	0,179***	0,236***	0,186***	0,876	0,747	0,383**
small nationalities of the Volga region and the North of Russia	1,277	1,190	1,450	1,041	0,802	1,363
Tatars, Bashkirs	0,230***	1,132	0,947	0,510*	0,640	0,812
other	0,598	0,843	0,262**	1,414	1,126	0,623
<i>Father wasn't a member of the CPSU</i>	1,494*	1,024	1,359*	1,251	1,239	1,150
<i>Mother wasn't a member of the CPSU</i>	0,815	0,786	0,751	1,021	0,753	0,870
<i>Father's education (Higher education is base outcome)</i>						
No high school diploma	4,690***	6,416***	7,363***	2,534***	2,356***	3,364***
High school diploma	3,605***	3,875***	2,589*	2,320***	2,742***	1,933*
Primary professional education	4,364***	4,300***	3,404***	2,462***	2,389***	2,210***
Secondary professional education	1,525	1,749**	1,235	1,719**	1,656**	2,003**
<i>Mother's education (Higher education is base outcome)</i>						
No high school diploma	5,772***	6,259***	5,947***	2,886***	4,706***	4,278***
High school diploma	5,409***	3,988***	3,831***	4,884***	2,998***	4,639***
Primary professional education	6,252***	4,221***	4,954***	3,103***	2,771***	3,840***
Secondary professional education	1,934***	2,291***	1,753	2,335***	2,257***	2,689***
<i>Age of father at a birth of a respondent</i>	0,999	0,988	0,973	0,997	1,016	1,000
<i>Age of mother at a birth of a respondent</i>	1,007	0,997	1,038*	0,976	0,963**	1,002
<i>Respondent was born in the village</i>	1,490***	1,075	1,935***	1,490***	0,996	1,456***
<i>In what republic of URSS respondent was born (Russia is base outcome)</i>						
Ukraine, Belarus, Moldova	0,901	1,593	0,312**	1,045	1,283	1,142
Transcaucasia	3,892*	1,256	2,416	0,790	1,029	3,805**
Baltic	1,489	0,000	3,836*	1,075	0,748	0,686
Asia	0,879	0,953	0,313**	0,950	0,948	1,294
Other republic	0,000	0,497	0,845	0,381	0,000	1,368

Table 6. Means of dependent and independent variables by cohorts. Sample: Russian population born in 1946-1990. (RLMS-HSE, 2006-2011).

	<i>Born in 1976- 1990</i>	<i>Born in 1961- 1975</i>	<i>Born in 1946- 1960</i>	<i>All simple</i>
<i>Dependent variable</i>				
No high school diploma	0,09	0,07	0,09	0,08
High school diploma	0,15	0,17	0,20	0,17
Primary professional education	0,20	0,26	0,23	0,23
Secondary professional education	0,21	0,24	0,26	0,23
University diploma	0,35	0,26	0,22	0,28
<i>Independent variables</i>				
<i>Age (in 2006)</i>	23,3	37,8	52,2	37,0
<i>Male</i>	0,47	0,47	0,41	0,45
<i>Ethnicity</i>				
Russian	0,88	0,84	0,84	0,85
Ukrainian, Byelorussian, Moldavian	0,009	0,023	0,031	0,021
nationalities of the North Caucasus	0,039	0,043	0,029	0,040
small nationalities of the Volga region and the North	0,028	0,037	0,046	0,036
of Russia				
Tatars, Bashkirs	0,025	0,028	0,031	0,028
other	0,017	0,024	0,020	0,021
<i>Father wasn't a member of the CPSU</i>	0,86	0,79	0,74	0,80
<i>Mother wasn't a member of the CPSU</i>	0,90	0,91	0,93	0,91
<i>Father's education</i>				
No high school diploma	0,17	0,41	0,69	0,41
High school diploma	0,15	0,10	0,03	0,10
Primary professional education	0,28	0,18	0,09	0,19
Secondary professional education	0,18	0,13	0,08	0,14
Higher education	0,20	0,16	0,09	0,16
<i>Mother's education</i>				
No high school diploma	0,12	0,37	0,70	0,39
High school diploma	0,15	0,13	0,06	0,12
Primary professional education	0,18	0,12	0,05	0,12
Secondary professional education	0,31	0,23	0,11	0,22
Higher education	0,22	0,13	0,06	0,15
<i>Age of father at a birth of a respondent</i>	27,5	28,7	30,1	28,7
<i>Age of mother at a birth of a respondent</i>	25,5	26,8	27,7	26,6
<i>Respondent was born in the village</i>	0,35	0,40	0,51	0,42
<i>In what republic of URSS respondent was born</i>				
Russia	0,95	0,91	0,91	0,92
Ukraine, Belarus, Moldova	0,016	0,031	0,039	0,029
Transcaucasia	0,009	0,015	0,015	0,013
Baltic	0,002	0,001	0,006	0,003
Asia	0,025	0,044	0,028	0,033
Other republic	0,003	0,001	0,002	0,003
<i>Number of obs</i>	2227	2419	2270	6916