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Accessibility of professional education in Russia.

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Accessibility of professional education in Russia.¹

In this paper, on the basis of data of RLMS and of Monitoring of economics of education, it is shown that factors of the family capital (first of all, incomes and the educational level of parents) represent an essential obstacle for educational options for Russian high schools graduates. The inequity in accessing professional education was strong in 1961-1990 as well as in 1991-2000. Some of the factors disappeared (parents' membership in the Communist Party, respondent's age), some became less influential (village as the birthplace). However, the importance of some parameters such as parents' human capital, increased. The existing social inequality of pupils' families becomes fixed and aggravated at high school level as children of poorer and less educated parents study at the worst schools and have lower progress. Therefore, the considerable inequality of educational intentions between pupils of 8-9 classes exists: children from families with higher social positions are going to receive full secondary education and will most likely be enrolled to the university courses while children from families with low level of the family capital are going to have only primary or secondary professional education. Subsequently, this self-restriction of intentions results in the social differentiation of students in three levels of professional education (primary, secondary and higher): university's students once studied at better schools and their parents have higher social positions.

1. Introduction

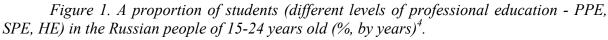
During the last 10 years the problem of the accessibility in Russia has attracted an increasing attention from more and more researchers and social policymakers. It is obvious, that high educational level of the population, on the one hand, increases the economic potential of the society, and on the other hand it raises the well-being of people, their social status, promotes inequality overcoming. However, education could be a factor of social mobility only if children of low income and low educated parents have the possibility to get their education and income higher than those of their parents. In postcommunist Russia some problems in education have become more transparent due to many causes including the social structures distraction, intensive mobility of people in the social hierarchy, the reduction of dependence between educational level and incomes in the mid-nineties, the appearance of social stratums with high level of education but low incomes, the rupture in norm of returns from the "old" (soviet) and "new" (post-soviet) education.

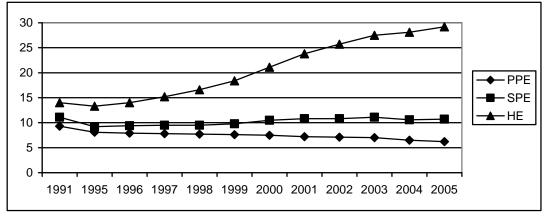
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¹ The paper is prepared as a part of the ESCIRRU (Economic and Social Consequences of Industrial Restructuring in Russia and Ukraine) project funded by the EU. The author is grateful to V.Paniotto, N.Kharchenko, S.Oksamitna for methodology discussion, and to V.Gimpelson and R.Kapeliushnikov for comments and suggestions made during various stages of the study. Only the author herself is responsible for the conclusions and for any mistakes. The author is also grateful to A.Bolotov and to E.Roshchina for helping with the translation.

Besides, during the last 15 years the number of students and their proportion in Russian population has grown which promotes the accessibility of education. However, this is mostly due to the investments into the educational sphere 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 proportion reached 50% of those who have entered higher education institutions this year. It seems obvious 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 possibility to get a professional education for a young boy or a girl – the specifics of the place of their residence, success in school, quality of training in school, parents' education, social networks of family, etc.

It is obvious, that Russia since the end of 1990th years experiences true boom in higher education, with very fast rates of growth. Between 1996 and 2006 the number of higher education institutions has grown almost by third, having reached the figure of 1068 (this growth has been mostly provided by the appearance of the independent institutions). At the same time the number of students has grown in 2,3 times (!), including students in the state education sector – in 2,1 times, and in private sector – in 6,4 times, although about 85 % of all students study in the state sector. At the same time the number of secondary professional educational institutions and students in them has not grown at the same level (from 1,9 million in 1995\96 to 2,6 million in 2005\06 academic year). The number of establishments of primary professional education² and the number of students entering them has been continuously falling (from 1,2 million in 1991 to 0,7 million in 2005). ³





² Further reductions are used: PPE – primary professional education; SPE – secondary professional education; HE – higher education.

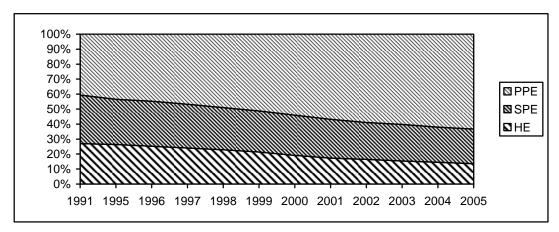
³ Data are from: "Education in Russian Federation", Moscow, SU-HSE, 2006. (Образование в Российской федерации. М., ГУ-ВШЭ, 2006.)

⁴ Data are from: "Education in Russian Federation", Moscow, SU-HSE, 2006. (Образование в Российской федерации. М., ГУ-ВШЭ, 2006.)

Note that the decrease in birth rate in Russia started only after 1991 and it has not affected the age cohorts of those who required professional education in 1995-2005 (approximately from 15 till 24 years old). Thus, the number of youth in this age group has grown from 19,79 million in 1991 to 23,45 million in 2005. Figure 1 demonstrates the dynamics of the proportion of students (primary, secondary and higher professional education) in Russian population of 15-24 years old. It is obvious, that in 1991 only less than 15 % of youth were students but in 2005 we have almost 30 %.

Thus, in 1991-2005 there was a restructuring of professional education: the proportion of students of higher schools among all students in the system of vocational training has grown from 40,6% to 60,2%, and these of primary professional educational institutions was reduced from 27% to 15,4% (figure 2). Undoubtedly, such change of the structure of demand for educational services has been caused by the growth of return on investments into higher education, as well as by change of values of youth. As sociological surveys show (Dubin (2004)) at the beginning of the 21st century the proportion of youth who consider that higher education is a necessary condition for their success and who aim to be graduates of higher schools, has increased.

Figure 2. The structure of professional training students of different levels (PPE, SPE, HE), in %, by years. ⁵



Consequently, we can see that the accessibility of professional education has grown in comparison with 1991, first of all thanks to the increase in the overall number of students in higher education institutions. At the same time, as this growth has been mostly due to the increase in the paid places (both in private and state sectors), the accessibility of professional training for poor groups of the population was reduced. As D.Konstantinovskiy's research (Konstantinovskiy (1999)) shown, there was a considerable social differentiation in the Soviet Union in professional training accessibility (first of in higher education) which has even

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⁵ Data are from: "Education in Russian Federation", Moscow, SU-HSE, 2006. (Образование в Российской федерации. М., ГУ-ВШЭ, 2006.)

grown in mid 90th. Children who have graduated from schools in small cities and villages, and children, whose parents were workers or peasants, possessed lower possibilities in educational sphere. Similar results (influences of a social origin on youth courses of life) were established by Cherednichenko (2004) for the period of 1998-2001. Our research (Roshchina (2004), Roshchina (2005)) also shown that in 2000-2004 social status of parents was one of the most important barriers in accessing professional education.

Despite the variety of works on inequality in education in Russia, we have no good reason yet for saying whether modern professional education in Russia fastens social inequality or it gives the possibility to overcoming it. The other question is in what measure does the education promote social mobility? Where we can see the deepest inequality: in access to higher education as a whole, or in access to "good" training, or to prestigious higher schools, or to some universities and professions? What is the main result of such inequality: its negative influence on economic and/or social development or social justice rules infringement?

It is necessary that the same concept of "unjust inequity in educational sphere" was generated both in public opinion and in scientific practice. If we know the factors of unequal access to education at its different levels and also the groups of a society subject to such inequality, that will give us the possibility to find the adequate measures of social policy allowing to overcome it.

The research objective of this paper is an estimation of 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).

2. Main approaches to understanding of equity and equality in access to education.

The higher educational level of the population is 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. Secondly, any increase of the educational level causes growth of incomes which are the factor of increase in a consumer demand and thus it would be an accelerator of economy. Thirdly, education is one of the few channels of ascending social mobility. At the same time the differentiation in people's education is necessary for the effective economy and for the stimulation of individual labor efforts.

That is why the problems of equity and equality of human possibilities in education are very important. The absence of equal access to education means fastening of an economic, social and cultural inequality, closing a way into the top class for people native to the bottom stratums of the society. Time came now to clarify what exactly do we mean by saying "the

equality in accessing education"? Is there any inequality in this sphere unjust or it is only considered in this way by the society?

Since 1960th the concepts of equality and equity (or justice) in education are treated as different by researchers in economic and sociological theories. To estimate whether there is some unjust inequality in education it is necessary to find factors of this inequality. As a rule, inequality is considered as equitable (just) if it is the consequence of unequal efforts and abilities of people. On the contrary, if the inequality of possibilities is connected with the differences in social status, incomes, gender, race, etc., it is appreciated by society as unjust. Thus, the way to achieve equal possibilities and equity in education is to eliminate the influences of social and economic factors on access to education but to keep its dependence on abilities and labor efforts.

There main approaches to defining the inequity in access to education are as follows.

- 1. *Inequity in the field of law* is considered as inequality of the rights fixed by the law. To overcome it all people should have equal rights to get education (discrimination in entering educational institutions by gender, race etc. must not exist).
- 2. The social and economic inequity, or unequal access to education (or unequal chances and achievements in education), is caused by the social and economic inequality of various groups of people. There are some theoretical explanations of this source of inequality:
- 2.1. *The economic* theory by G.Becker (Becker (1964)) explains inequality in education by the difference in the amount of investments into the human capital that families and individuals make and which depends on their resources and on distinctions of expected benefits.
- 2.2. The economic-sociological concept by J.Coleman (Coleman (1988)) suggested that education is the transformation of family's capital into the human capital of children. Here family's capital is the sum of economic, human, social, cultural capitals of parents. The difference of children in the level and quality of their education hence by their own human capital is due to unequal amounts of their families' capitals.
- 2.3. Sociological approach by P.Bourdieu (Bourdieu, Passeron (1970)) considers the problem of unequal possibilities in education in the context of social reproduction analysis. The inequality accessing education is explained by the distinctions in social origins and by cultural distinctions.
- 3. Some inequality is caused by the differences in the previous learning experience. According to this rather new conceptual approach unequal possibilities in accessing higher education first of all depend on different quality of education in high schools. Consequently,

the social origins are not the main sources of this inequality. However, we must note that inequalities may be caused by an unequal access to high schools and to preschool education.

3. Theoretical background of research.

From the point of view of the economics theory, studying in an educational institution is an investment into the human capital (HC) (Becker (1964), Mincer (1958)). People decide to invest because they expect a certain return on this HC 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 alternative costs (the first should be higher). There are some other economic theories of education: the theory of signals, the theory of "stoppers", the theory of risk and uncertainty insurance (Freeman (1986), Kodde (1986), Spence (1973)). The influence of education on ideological system, its interrelation with others institutional factors are also discussed in the economic theory (Schultz (1975)).

Sociology also suggested some theories of education such as as functionalism (selection of the most capable individuals, socialization of youth), reproduction of culture (Bourdieu (1970)), reproduction of social structure (M.Veber), methodological individualism (Boudon (1979), Coleman (1988)).

How to conclude whether the existing inequality in accessing education is just or unjust? Almost any society agrees that some inequality in education is necessary, as it stimulates individual efforts in knowledge achievement. The formula is standard: «success = the contribution of school + personal efforts». Differences in income which depend on education and educational distinction depending on abilities and efforts of the person are considered as just. Other distinctions are estimated as unjust. Hence, to increase the justice in accessing education it is necessary to minimize the dependence of one's educational options on the social origin and to maximize this dependence on abilities and efforts of pupils. Otherwise education fixes and aggravates existing social inequality.

Provided that the investments are the same the real inequality in the access to education is seen in different investments into human capital of children, and in different amounts of their human capital due to the difference in their own abilities and efforts. According to G.Becker's hypothesis the amounts of investments of a family differ because the investment is the expense of resources of a family (money, time, human capital of parents), and the more family resources are limited the lower are these investments. The income influences investments in education of children positively, while the number of children – negatively. The more is human capital of parents, 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 distinctions of students' families in volumes of their family's capitals.

It is common to distinguish various types of such family capitals. First, it is the economic capital which is measured as the level of incomes of a family. Secondly, it is the human capital, or education of parents. Thirdly, it is the cultural capital. J.Coleman suggested to also consider the social capital – the specific kind of resources due to social relations (and social networks). The author distinguished the internal social capital of a family, or intrafamily relations, and the external social capital – a family inclusion into social institutes and social networks, region of living, etc.

Such inequality of family resources is reflected first of all in an unequal arrangement of curves of the offer of investments into the human capital whereas distinctions in curves of demand for these investments is connected with an inequality in innate abilities of pupils (a society considers that this inequality is fair). However it happens quite often that children in richer families possess higher abilities.

The state's guarantee in the educational sphere, according to G.Becker, is one of the possibilities of the alignment of inequality in the access to education. "State intervention in the provision of education and other human capital could raise investments in children to the efficient levels. Since poor parents are least likely to make efficient investments, such intervention would also reduce the inequality in the opportunities between children from richer and poorer families. ... A state usually set minimum requirements at a level that was already exceeded by all but the poorest families in that state. These laws raised the schooling of poor children but did not tend to affect the schooling of other children." (Becker, Murphy (1988), p. 6)

However, besides the capital of a family (or of parents), at the moment of leaving school children already possess some human capital received at school and at home (it depends on the level of school and knowledge and the culture, transferred by parents). Health is also one of the kinds of human capital.

Contrary to the theory of the human capital, the theory of signals (Spens (1973)) believes, that the education's leading role is not expressed in increasing knowledge and skills of people, but in being exclusively the mechanism of selection of people on their abilities. The more ability of a person is, the higher educational level he/she can reach, and this educational level represents a signal for the employer during the selection of applicants for the given job. Thus, for each individual education is effective as it allows to occupying a better job. At the same time the problem of inequality in accessing education smoothes out, as the

educational level becomes a function of the natural ability of an individual, instead of his/her social origins and levels of family incomes.

Sociological approaches to the analysis of inequality in accessing education also offer various understanding of what is the place and the role of education in the society, what are the reasons for inequality, and what are the ways to overcoming it (Benadushi (2001)).

According to *the functionalism*, two types of factors influence inequality in education:

- 1) ascriptive factors, such, as social class, gender, or ethnic group;
- 2) achievement factors (abilities and efforts of pupils).

Only factors of the second group are functional (that is, useful to the society). The distinctions connected with these factors are admitted as fair.

The content of the concept *of the social (cultural) reproduction* offered by P.Bourdieu (Bourdieu, Passeron (1970)) is opposite to the context of functionalism, though their methodology used in empirical researches is rather the same. The main idea of Bourdieu and Passeron is that an education system reproduces social structure which is necessary for the society. The main role in the differentiation of the access to education belongs to a social origin while individual factors (abilities, etc) are almost ignored. Distinctions in the access are considered at the level of social groups. The given concept is a sort of some radical pessimism – it is impossible to eliminate an inequality, and no reform of an educational system is able to do it. Education reproduces and legitimates an inequality.

The concept of cultural reproduction has some theoretical and practical consequences:

- A. Inequity in education is due to a social inequality and its influence on abilities, behaviour and intentions of young generation concerning education.
- B. Cultural capital concept (and also social capital concept) allows to explain variations in educational successes by corresponding socially-demographic indicators of a social class and educational level of parents (which is embedded into the concept of the cultural capital).
- C. Differences between the family's social capital and the cultural capital have given the chance to other researchers (DiMaggio (1982)) to assert, that the cultural capital is an element of the status culture which are distinct from a status position. The interrelation between them is limited, as investments of parents into education of children remain supervised, unlike their investments into the social capital.
- D. The main part of the variation of inequality remains not explained and consequently it is necessary to agree that the inequality also exists within the group not only between groups.

Cultural-relativistic and pluralistic approaches underline the role of school in the reproduction of a social inequality. The main role here is not played by characteristics of an individual as main factors of inequality in education, but by system characteristics – cultures, schools etc. The New English sociology of education emphasises inequality of curricula (Foster, Gomm, Hammersley (1996)). Supporters of this concept consider that equity in education demands the possibility for each social group to have the differentiated curricula. American interpretive sociology of education believes that the main source of inequality in school achievements of representatives of ethnic minority in comparison with other schoolchildren is the discrepancy of language patterns and of socialization practices at school and at home. The given concept suggests to apply pedagogical strategy to advance cooperation in learning of children of ethnic minority, not competition between them.

The French sociologist R.Boudon (1973), from the point of view *of methodological individualism* described inequality in education in decision-making terms where people compare costs, benefits and risk, connected with each possible choice. The choice depends on the objective and subjective resources and on pursued purposes. Variables of resources as well as group subculture influence this choice. However, his last research (Boudon 2001) gives more attention to the cultural component, rather than to the economic rationality.

R.Boudon considered that individuals from different social groups attribute different weight to expenses, costs and risk at decision-making on whether to continue further study, or to start their employment. One of the sources of inequality is distinctions of these scales. The main conclusions of this theory for social policy are following. It is possible, to some extend, to constrain inequality by shifting decision-making points to more advanced age and by reducing the quantity of such points. The second way is to reduce private costs of education for poor pupils.

Thus, it is possible to conclude that major factors of inequality are connected with differences in the amount of the family capital (P.Bourdieu, J. Coleman) and with individual characteristics of pupils. To estimate inequality it is necessary to measure how the following parameters influence the access to education:

- Family incomes (they are used for direct costs payment for education, the preparatory level, learning in an educational institution, and alternative costs habitation, food etc. of child during the training);
- Family structure (families with one parent, big families, families with considerable number of children have the worst chances);
- Education of parents;

- Individual characteristics such as gender, health, nationality, religion, values, norms:
- Teaching level at school, received knowledge (connected both with teaching level at school, and with abilities and diligence of pupils)
- Residing region (payment is necessary for a trip on examinations, for a hostel; preliminary courses are inaccessible).

The finding of the most significant factors indicates that it is possible to consider corresponding social groups as more vulnerable in the availability of education.

4. Empirical research on the accessibility of education.

Sources of inequality in education and ways of its overcoming are actively studied since 1950th. Empirical research allowed to reveal the main reasons for inequality. One of the main reasons is a different value of education in different social groups. This value is greater in the top and the bottom groups as education and the educational certificates, "diploma", serve as determinants of the social status.

Research in 4000 schools of USA by Coleman, Campbell, Hobson and other (1966) «Equality of Educational Opportunity» is widely known. It concludes that the difference in successes of pupils can be explained by their social origin and social context rather than by school difference. Distinctions in school conditions have weak influence on the academic successes, but the influence of distinctions in a family origin and of an environment of pupils is strong. In 1982 he has published the results of another project (Coleman et all (1982)) where he compared schools owned by state, private and public organizations. This research has shown a significant influence of the type of school on one's success and possibility to continue training in higher education: they were considerably better in private schools than in state ones.

In the paper by Ermisch and Francesconi (2000) it has been shown that success of children in school depends negatively on mother's employment, and positively on the family incomes.

Special research on 11 years old during their transition from elementary to secondary education has been undertaken in France (Boudon (1973)). It showed that children of workers study worse, children of the qualified experts do it better. But these distinctions are less than differentiation of families. Intentions to continue their study differ a little depending on a social origin for pupils who have high successes in school. The difference in intentions to continue training is apparent for pupils who have intermediate level of marks.

A big number of projects was devoted to the analysis of the educational choice which reflects inequality of intentions and inequality of chances. The paper by Hossler, Braxton, Coopersmoth (1993) reviews these works. Situations of a choice can be divided into three types: a choice between possibilities to continue education or to start working, an educational level choice, and a choice of concrete educational institution.

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 researches 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 XX century.

From the end of 1980th the works devoted to inequality in education actively use multilevel regression model for the analysis of the influence of institutional factors (school and training characteristics) on the progress of pupils and their possibility to continue education, for example Lee, Bryk (1989); Kreft (1993).

Many papers pay main attention to the influence on the access to education of such factors, as social group, language, cultural and social capital, family structure. Ayalon and Yuchtman-Yaar (1989) have shown that the level of successes in school makes strong impact on a choice of the future profession. Good pupils choose professions which demand a high educational level. Weak pupils prefer professions potentially leading to high income, but which do not demand the great efforts during the training.

Hofferth, Boisjoly, Duncan (1998) have shown the role of parents' access to resources of time or money of their friends, along with influence of the human capital and of financial resources. The help of friends influences probability of being enrolled in a good college, but do not influence the probability of the termination of high school. The situation varies depending on the level of the family income and the social status. Lynch, O'Riordan (1998) proposes three types of barriers in the access to higher education: economic, cultural and educational.

Konstantinovskiy (1999) was one of 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 interrelation with characteristics of families, estimated the dependence of chances to be enrolled in higher school on social origin.

Some projects of Independent institute of the social policy (IISP), undertaken with the assistance of the author of this paper were devoted to the analysis of inequality in higher education. The first of them concentrated on searching for social groups, which were the subject to such inequality (IISP (2004)). The purpose of the second project was to find factors of the accessibility in higher education of different quality (IISP (2005)). Other research with the assistance of the author (Vakhshtain and other (2006)) has allowed to find factors of inequality in accessibility of good school education, such as information, social, institutional barriers and others.

5. Concepts used

Chances to continue education is the dependence of the probability of the transition to the next level of education on the level of family capital.

The family capital is the sum of resources of a family that can be converted into human capital of a child. Several types of family capital that can be measured from the data are considered in this paper: human capital of parents (level of education, occupation); financial capital (income, wealth); cultural capital (computer at home, size of home library); human capital of a child (school type and results at school).

By the *Factual availability of education* we understand the probability (or chances) to get education of the given level (for example, secondary professional or higher education) or education of different quality (for example, basic or prestigious higher school). *The inequality in access* is tested as dependence of the probability to get education on any socially-demographic factors (for example, the income). *The inequality of intentions* is a dependence of the probability of intention (or desires) to enter in educational institution of the given level with the given quality of training on social distinctions.

6. Research methodology.

The main tool of the analysis is regressions estimation. In the model for estimation of inequality the dependent variable is the probability to have a certain level of education, or to enter this level. In the model estimating inequality in intentions the dependent variable is the probability of intention to enter the next level of education. Independent variables in both models are characteristics of a family capital and human capital of a respondent.

It is possible to estimate the model of the accessibility *of higher education* (probability to be enrolled next year) only for those respondents who have an objective possibility to enter higher school (i.e. those who obtained a diploma of general secondary education). Chances to

get higher education have been realized if an individual was enrolled to a higher school or had already graduated from a higher school.

<u>Exogenous variables</u> (determinants of models). Many empirical works support theoretical assumptions that investments into the human capital of children and their educational chances (for example to be enrolled into a higher school) are determined by the level of family capital (financial, human, social, cultural). Therefore, we will use the following determinants (different for different type of data):

- 1. Individual characteristics and human capital of a child
 - 1.1. Individual parameters (gender, age, health)
 - 1.2. Human capital of an individual (school type, results at school)
- 2. Region and settlement type
- 3. The level of family capital
 - 3.1. The material and financial capital (estimation of wealth, incomes, savings etc.)
 - 3.2. The human capital of parents (education, employment, occupation)
 - 3.3. The social capital (relations with children and presence of network contacts)
 - 3.4. The cultural capital (size of home library, computer at home, nationality, family spoken at home, religion)

The social differentiation across the students of educational institutions of different levels of professional education is considered based on comparison of means and on correlation analysis.

7. Empirical data

One of the data source is Russian Longitudinal Monitoring Survey (RLMS) in 2006 and-2007. There are panel data that made it possible to compare the past and the present parameters of the same household. The sample of this study is representative for Russia as a whole⁶. The vast list of variables about every household and each of its members let to analyze human behavior in different areas: health, incomes, education, labor and so on.

The other source is the data obtained within the Monitoring of Economy of Education (MEE)⁷. This survey is made by the State University Higher School of Economics in cooperation with sociological analytical centers "Levada Center" and "Public Opinion Foundation" since year 2002. We focus on the data collected in years 2006, 2007 and 2008 in schools, colleges and universities in all Russian federal districts. The sample is representative for pupils of all this level of education. This sample is stratified by such variables as region,

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⁶ See project description at http://www.cpc.unc.edu/projects/rlms/project.html

⁷ See project description at http://education-monitoring.hse.ru/info.html

type of settlement, property (State or private), number of pupils, specialization. There were more than 200 educational institutions in the sample of every year. This survey is panel for institutions but not for people. Students of colleges and universities and parents of pupils in primary and high schools were questioned. Table shows the sample volume for every years and every level of education used in this research.

Table 3. Number of students surveyed (or of parents of pupils – at high schools) on

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	2006			2007			2008		
	Regions	Moscow	Total	Regions	Moscow	Total	Regions	Moscow	Total
8-11 classes of high schools	846	264	1110	825	248	1073	768	245	1013
PPE	198	406	604	403	204	607	413	501	914
SPE	206	409	615	404	206	610	309	613	922
HE	1025	2017	3042	2010	992	3002	317	2674	2991

8. Results of research.

8.1. Educational attainment of the Russian population and its dependence on parents' education.

During the recent 20 years the level of education of the population of Russia has significantly increased. According to population census of 1989 only 45,2 % of the population had special professional training diploma (including 11,3 % - higher education), and 19,4 % had education only at the level of primary comprehensive school or even had no primary education. By 2002 the proportion of people with professional education has grown to 57,9 % (including 16 % - with the higher education), and the proportion of those who had an educational level of primary school and less has declined to 8,7 % (figure 4).

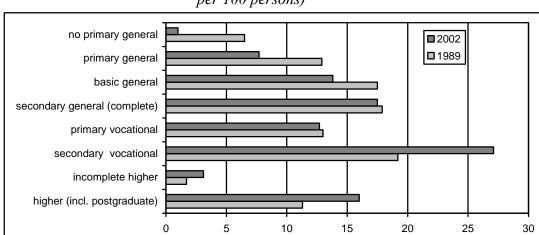


Figure 4. Educational attainment of population (by results of population censuses; per 100 persons)⁸

⁸ Russia in figures. Moscow, Rosstat, 2008. (Россия в цифрах. М., Росстат, 2008.).

The comparison of profiles age-education for 1989 and 2002 shows a solid growth of the proportion of population with primary and secondary professional education at the age cohort of over 35 years (in the age cohort of over 55 years this level increased more than twofold). These profiles also imply that the educational level of people of age cohort over 50 years is significantly lower. The proportion of people with higher or incomplete higher education of all ages has grown by 1,3-1,8 times, and for the people older than 55 years – in 1,8-2,6 times (figure 5).

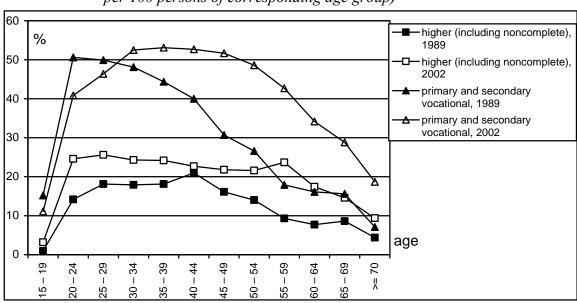


Figure 5. Educational attainment of population (by results of population censuses; per 100 persons of corresponding age group) 9

Educational attainment of economically active population is even higher. According to the data, the proportion of economically active population in Russia with higher education (including the post-doc education) has grown from 15,8 % in 1992 to 24,6 % in 2006 (table 6). At the same time the proportion of people with basic general/comprehensive education has fallen (from 14,7 % to 6,4 %), and nowadays it is very unlikely to meet an individual with elementary education of even lower.

Table 6. Education of economically active population of Russia. 10

			Education										
			professional										
		higher (incl. postgraduate)	incom- lete higher	secon- dary	primary	secondary (complete)	basic	No primary education					
199211	100	15,8	1,8	31,4		33,2	14,7	3,1					
1997	100	18,8	1,9	32,0		33,9	11,0	2,4					

⁹ Russia in figures. Moscow, Rosstat, 2008. (Россия в цифрах. М., Росстат, 2008).

¹⁰ Labor and employment in Russia. Moscow, Rosstat, 2008. Table 1.10. (Труд и занятость в России, Росстат, 2008).

¹¹ The classification of educational levels applied by Rosstat in 1992 and 1997 was different from the one of 2002 and 2006.

2001	100	23,0	2,5	30,6	11,8	23,6	7,5	0,9
2006	100	24,6	1,8	25,0	18,0	23,5	6,4	0,6

As it was mentioned above, for the recent 16 years in Russia educational capacities (quantity of students an institution plans to enroll) of higher educational institutions has essentially grown. Therefore even with the growth of the number of people in the age cohort of 15-24 years old that occurred in the years 2000-2005 the increased intake capacities of institutions provided that the proportion of the young studying in higher schools has also grown. At the same time the demand for secondary and especially primary professional education has slightly decreased. According to the data, the fraction of students enrolled to professional training of all forms among the number of the young (15-34 years old) has grown from 15,3 % in 1995 to 24.8 % in 2005. 12

RLMS data demonstrate similar dynamics. In 1994 among all respondents of the age of over 15 only 16,7% had higher education, 39,8 % - primary professional or secondary professional education, and 43,5 % - the comprehensive education or even lower. However in 2002 these figures have already grown to 17,2 %, 39,4 % and 43,4 % accordingly, and in 2006 – even 19,4 %, 40,8 % and 39,8 %. The survey also confirms the conclusion based on the (aggregated) data: the level of education in the older age group is significantly lower. The evidence is even stronger if the level of education of the respondents' parents is compared with their age (tables A1.2, A1.3 of Appendix 1).

Thus, it is quite obvious that during the recent 15 years the accessibility of professional education (mainly of higher education of all types) has grown. However it should be pointed out that here the accessibility is considered as chances of an individual to be enrolled, that depends directly on the increased relative capacities of the universities and other educational institutions (relation of number of places to number of the young of corresponding age).

However such a concept of accessibility seems to be too simplified. As argued above, the inequality of the accessibility in education of a certain level arises from social and economic characteristics of an individual or his family, excluding his/her own abilities and effort. Therefore, the increase in quantity of high schools due to growth in number of private educational institutions can lead to the increased accessibility of education only for some social groups (with high level of the income), but not for the whole population.

The rather high correlation between parents' educational levels and those of their children supports the hypothesis that the strong inequality in the accessibility to education is

¹² Education in Russian federation. Moscow, SU-HSE, 2006. P. 305. (Образование в Российской Федерации. М., ГУ-ВШЭ, 2006.)

still present. The RLMS data for the year 2006 contain information on respondent's parents' level of education at the age of 15 of a respondent (this is the age, when the influence of parents' human capital on future level of education of their child is the most strong). The other data show whether respondent's parents were members of the communist party at Soviet times. Under socialism in Russia and in some other countries of Eastern Europe parents' membership in the communist party was a substantial part of social capital, and several researches¹ have shown that membership in the party was a significant factor of children's chances to get higher education.

According to the tables A1.4 and A1.5, for all three age groups of Russian labor force in 2006 demonstrate strong dependence of the educational level of a respondent on parents' education. Thus, among all respondents aged 45-60 only less than a quarter have graduated from a higher school, and in comparison in the group whose father had higher education the corresponding share was equal to 63,5%, fathers with secondary professional education – 41,8%, with primary professional education – 30,2%, with secondary comprehensive education – 35,7%. The same is true for mother's education. Therefore, for those who was born in 1946-1961, generally any level of parents' education, except incomplete comprehensive education, raised chances to finish higher school, and the greater the level of education of parents is the higher are these chances for their child.

In contrast, for age cohorts born in 1962-1975 and in 1976-2000 only secondary or higher professional education of parents did have positive influence on the probability for a child to be enrolled into a higher education establishment. For those whose father or mother had only primary professional, general secondary education or even education of a lower level, this probability was smaller, than for the whole population. This implies that since the second half of the 1970s, social mobility (in the sense of educational differences) 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 supported by the evidence that in two older-aged groups of over 35 only about 10% of children, whose parents had no comprehensive education, got the same level of education, and in the age group of under 30 years this share is equal to approximately 25%.

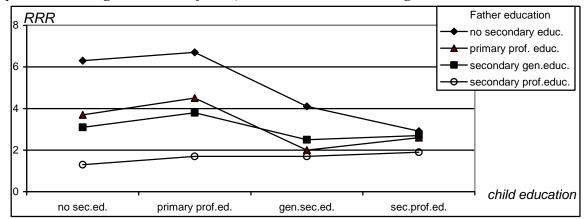
As data show membership of parents in the Communist Party raised chances for their children to get higher education, but it didn't differentiate the access to other levels of professional training (table A1.6). For those who was born after 1976, the father's party status was more important that the mother's one.

Let us estimate the model of probability to get the education of given level depending on gender, age, nationality, characteristics of parents and birthplace for work-eligible Russian people in 2006 at the age of 21-60 years old (the age group of 16-20 years is excluded as the part of youth at this age still goes to high school, others do some attempts to be enrolled in higher school, etc.). Unfortunately, other variables in RLMS dataset are endogenous in model with dependent variable "the educational level achieved". The method of this model estimation is multinomial regression; base outcome is «respondent has higher education or he is studying in higher school». Model estimations were made for all population of 21-60 years old (table A1.7), and also for three different age groups of people: 21-30 years old, 31-45 years old, 46-60 years old (table A1.18).

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 secondary education, the probability that his child has no secondary education too (in comparison with the probability for him to have higher education) is more than six time greater than in the case of father's University diploma. Child's chances of having primary professional education are about the same, and they are smaller for having diplomas in general secondary and professional secondary education. As figure 7 shows, the greater the father's human capital is the better are chances of a child to be more educated. If father's education is lower than secondary professional, it is most likely that his child would have only primary professional education or would have no general secondary education with the following chances open - to have general secondary or professional secondary education. A university diploma is the least possible diploma.

Figure 7. The ratio of the probability of having some given educational level for a child to the probability of having higher education for child, depending of father's education (in comparison with higher educated father) – relative risk ratio in regression model.



However, in the case when father's education is secondary professional, the same level of child human capital is anticipated. This probability is 90% greater, and the probability of

other variants (primary professional or general secondary education) is 70% greater than the one of having the University diploma. Just the same conclusion could be made on the influence of mother's education, but the impact of the latter is greater.

As we can see from the table A1.7, 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 USSR;
- respondent's nationality is "North Caucasus" or "small nationalities of Volga and North regions (concerning only general secondary education);
- respondent's gender is male (excluding secondary professional education).

In general, given all other factors, younger cohorts have better chances to have primary professional diploma or to have no secondary education, than to be graduated from University. But there is almost no impact of the year of birth on the probability to have diploma of high school or of secondary college in comparison with the university diploma.

We could find no influence of the region were 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 have better chances in education).

As for the majority of sub-population (21-60 years old in 2006) the most probable time to be enrolled in the college or in the university was the Soviet Epoch, the general conclusion is that there was no equality in accessing professional education in USSR. The most serious barriers were small amount of parents' human capital and parents' power 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.). It is a pity that there are no data about family incomes (when respondent were 15) and type of school were 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 age groups of people. The fist one consists of respondents aged 21-30 in 2006. They were only 15 during 1991-2000, and so they could be the applicants for the schools of professional education (primary, secondary or higher) in the first decade of post-socialism. The members of the second group (31-45 years old at 2006) were 15 at 1976-1990, so, we can measure the difference of chances at that epoch of late socialism. And respondents in the third age group were 15 at 1961-1975: this period is

the earliest period to test the issues of the inequality of educational chances in the USSR (see table A1.8 of Appendix).

As regression models estimations show during all three periods investigated people suffered from inequality in accessing 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 years (1961-1975) to following ones (1976-1990): for example in 1961-1975 the child of a mother without any diploma had the chances to remain at the same educational level 5,8 times greater than to graduate from university; but in 1976-1990 this ratio raised 26,5 times! During the period of 1991-2000 the effect of mother's primary and secondary professional education and of high school diploma on the probability that her child has no diploma or is graduated from primary professional college increased, but this effect on the probability to have no general secondary education decreased. 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 that the father's one.

The influence of respondent's gender is very high for all level of education excluding secondary colleges (in comparison with University). Young men had more chances to remain without any diploma, or to have high school or of primary professional education diploma than to be graduated from the university or secondary professional colleges. Their access to secondary or higher professional education became even worth in 1991-2000.

It is obvious that to be born in a village resulted in greater probability to remain without any professional education at all periods. But the chances of all level of professional education for rural children were rather the same in 1976-2000 whereas a university diploma was less probable for them in 1961-1975.

As data show father's membership in the Communist Party was a significant factor of child's university education only in the earliest period (1961-1975). For age cohort of 46-60 years old at 2006 probability to have no secondary or higher professional education decreased with their age: this fact confirms that some of them were enrolled in universities and secondary professional colleges some years after graduating the high school. This dependence disappeared later: in the other words, the majority of people became undergraduate students just after school.

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

The main conclusion can be made: the inequity in accessing professional education was strong at all three periods given. Some of barriers disappeared (parents' membership in Communist Party, respondent's age), some became less strong (village as the birthplace), but the importance of other even increased (parents' human capital).

8.2. Social differentiation of pupils from different types of schools.

According to the Monitoring of economics of education data for 2006-2008, strong segregation of pupils originated from different social stratums by types of high schools is obvious (table A2.1, Appendix 2).

Among pupils of grammar schools and specialized schools there are more girls (57%) than boys. Most of them are only children in their families or rarely have siblings. At least one of their parents has higher education. 60% of mothers and 40% of fathers are professionals, the share of heads of departments (10% of mothers, 15% of fathers) and heads of the enterprises (13% of fathers) is high enough. Many mothers are occupied in science, education, culture, and many fathers – in the industry. These families estimate their financial status as secure enough (46%), the average income is about 10 thousand rubles per capita a month. As a rule their libraries count from 100 to 500 books, and almost all (86%) have the computer.

In private schools parents of pupils are at about the same educational level, however they occupy higher professional positions (38% of fathers are heads or proprietors of the enterprises). The proportion of parents working in the financial services and trade is rather high. Only 9% of families of these pupils have no computer. As a rule their libraries are even bigger than in the first group (more than 250 books), and the level of their incomes is the highest in the sample: about 22,5 thousand rubles per capita. Three quarters of these families consider themselves as well-to-do. In this group the proportion of the families with only one parent is the lowest (11,6%).

The third cluster significantly differs from two groups mentioned above. In this cluster there are pupils of non-specialized schools in the main city of a region and also in small towns. In the major part of these families at least one of the parents has higher education (64% in towns and 69% in the regional centers), however most of the mothers work as employees, and among fathers there are experts, employees and workers, but there are few heads of departments or enterprises. Prevailing sphere of employment of fathers is industry (almost half of them work here). In regional centers average incomes are a little higher than in other towns (7,7 thousand rubles per capita against 5,3 thousand rubles), their self-estimation of good well-being is higher (35% against 26%), the proportion of households with computer

at home is also bigger (77% against 66%). The proportion of one-parent families is very high in both of these groups: 17% and 19%.

Parents of pupils in rural schools possess the lowest human, financial and social capital. Only in 40% of families at least one of the parents has higher education. Pupils' mothers are mostly employees or don't work. The fathers are workers (including agriculture workers) and employees. Only 18% of families consider that their well-being is sufficient, and 30% believe that any daily expenses except those on a foodstuff are exhausting for them. Average income per capita in village is about 5 thousand rubles a month. In 78 % of households library is less than 250 books, only half of them has got a computer. Three quarters of families have two and more children.

8.3. Educational aspirations of pupils in years 8-9.

The main distinction of educational possibilities at high schools appears after finishing year 9 (9th class in the Russian system). The majority of pupils aspire to be enrolled in further education in 10th and 11th classes. The considerable part of those who finish 9 classes with the diploma of the general secondary education is going to be enrolled in institutions of primary or secondary professional training. So, as Monitoring data show, among pupils of 8-9 classes only 67% are focused on being enrolled in higher schools and among 10-11 classes – 87%. However, the proportion of those who have not decided where they would like to study after school or who do not even know whether he\she will continue their education in 8-9 classes is three times larger than in pupils of 10-11 classes (15% against 5%). Less than 1% of pupils are going to work (without studying simultaneously in the university or college) or to the army right after high schools.

Let us look now what factors define professional and educational plans of schoolboys and schoolgirls of 8-9 classes (table A2.2). 76,6% of them are going to continue their study at 10-11 classes, and 7,3% are not. The others (16,1%) are not sure what to do or their parents do not know anything about their intentions. Distinctions between different types of high schools are great: the proportion of those who are going to continue their study at 10-11 classes made 81% of pupils in private schools; in grammar schools and specialized schools -85%; in ordinary schools of the regional centers - 81%; in schools of other towns – 89%, in rural schools – 57%. Thus 12% of children in ordinary schools of the regional centers and 14% in rural schools are sure in their wishes of not studying in the senior classes of high school. In the other types of schools this share made no more than 3-4%. Other pupils have not yet decided what to do in the future.

<u>The first group consists of the pupils planning to study in 10-11 classes</u>. Among schoolboys and schoolgirls who are going to study in 10-11 classes 78% are focused on being

enrolled in higher schools after getting general secondary education diploma (20% of them wish to combine study with work). Only 5% are going to be limited to the level of secondary professional education. About every eighth of these pupils do not know still where he\she will study; only 0,1% plan to go to army after the end of 11th class (nobody plans to work without future studying). In this group the proportion of girls is a little bit larger then of boys (54,2%). Parents of these pupils are more educated, than in other groups. Most of them work as professionals, employees or heads of enterprises and departments. They are occupied in science, education, public health services and culture, and also in financial and information services, and in the public management. Here there are few children of one-parent families and many children come from the families with only one child. Their average incomes are the highest (more than 10 thousand rubles per capita), 41% estimate their well-being as rather high. Many families have a house library bigger than 250 books. Therefore it is no wonder, that such families have good possibility to choose better schools for their children, to pay for their additional training that aim to increase chances to be enrolled in higher education, to provide them with recourses during their next period of studying.

The second group includes the pupils who do not plan to study in 10-11 classes. Considering those children who do not plan to get diploma of full secondary education at high school, we can see that 81% of them wish to be enrolled in colleges or technical schools after general schools, however the half of them would like to have higher education in the future. The proportion of those who do not know yet what to do after high school is low (5,3%) here. On the contrary, the proportion of those who are going to army is a little bigger than in the first group (1,3%). In this cluster there are more boys than girls (61%). Parents of these pupils are very low educated (only in 39,7% of families at least one of the parents has higher education) and there professional positions are low too (16% of mothers and 29% of fathers are workers). Among employed parents the highest is the proportion of those who work in the industry (30% of mothers and 40% of fathers). Approximately every fifth child has no father; three quarters of pupils have siblings. At their houses there are few computers and books (38% of families have less than 100 books), incomes per capita are in 50% lower than in the first group.

In the third group there are children who do not decide yet whether they will study in 10-11 classes. This cluster of children with uncertain plans occupies the intermediate position between two previous groups by education and professional positions of parents. The share of families with the computer at home is the lowest. At the same time the families' structure and incomes per capita are closer to group of children who plans to get full secondary education at high school.

8.4. Inequality of educational intentions of pupils of high schools.

What are the causes of the difference in children' intentions to continue or discontinue their education? Do financial positions of their parents play the key role, or their own aspirations and abilities are more important? According to the theory, the inequality of intentions, if it exists, should be expressed in dependence of child's plans on the family capital, and also on his abilities, efforts and knowledge.

To estimate whether there are is any inequality of educational intentions we use the model of probit regression for data of 2006-08. In this model the binary <u>dependent variable</u> measures whether a pupil studying at 8-11 classes plans to be enrolled in higher school or not. Independent variables are as follows.

- 1. The family capital:
- o the human capital of parents (education, job and occupation),
- o the cultural capital of parents (how big is house library, is there computer at home),
 - o the financial capital (incomes),
 - o the social capital (structure of a family and number of children).
- 2. The human capital of the child (type of school and its specialization, his\her progress at classes, additional training).
 - 3. Personal characteristics of the pupil (gender, class).
 - 4. Environment conditions (region, settlement type).

1098 parents of pupils of 8-9 classes and 2098 parents of pupils of 10-11 classes have been surveyed in 2006-2008. 76,3% of all families lived in regions, 23,7% - in Moscow. The estimations of regression models have shown strong dependence of educational intentions of pupils first of all on their own human capital: their progress at school, school type, an additional training, knowledge of some foreign language and Internet use (table A2.3).

Three models were estimated: the fist one on the whole sample, the second one – on the sub-sample of pupils of 8-9 classes, the third one – on the sample of pupils of 10-11 classes. As one can see the most influential factor of educational intentions for pupils of 8-9 classes is their school progress: the marginal effects of marks "good", "good and excellent" and "excellent" surpass 0,24. If schoolboys and schoolgirls are studying in a grammar school or in a specialized school the probability that they intend to be enrolled in university is also higher. Territorial barriers also exist: pupils from Moscow and from villages are less interested in getting a university diploma. The first fact is rather mysterious for us.

Pupil's skills such as foreign language, computer and Internet knowledge are positive factors of high educational intentions. It testifies that young people human capital reached at school give them some certitude of accessibility of higher education.

But all these factors (excluding type of settlement) are in fact some proxies for human abilities and past efforts; that is why their significance doesn't confirm the inequity of the accessibility in education. However, other researches have shown that more educated and richer parents have better possibilities to choose good school for their child and to help him in school progress and in other skills and knowledge.

Nevertheless there are direct confirmations of unjust inequality of intentions at this step of decision making: impacts of such factors as family income, size of home library and home computer are significant and positive. It means that financial and cultural capitals of pupil's family are barriers in the aspirations of youth of 8-9 classes. At the same time parents' human capital is not significant as well as their employment positions, family structure and interim social capital. Becker's hypothesis about the negative relation between the number of children in the family and their "quality" (or human capital in fact) is not confirmed here too.

It is well known that most pupils without intention to be enrolled in universities leave high school after finishing 9th class. Nevertheless some of pupils of 10-11 classes do not have such plans. Let us see now if there is any difference in this distinction explication. First of all, it is obvious that the influence of the school progress, school type and some skills and knowledge became weaker. At the same time the impact of the family financial and cultural capital disappears, while the mother's human capital became more significant. Educational intentions of pupils of village schools are lower than those in towns and cities including Moscow.

This models estimation confirmed that the principal decision about future level of child's professional education is made during 8-9 classes of a high school. At this step the inequity of the access to education is rather great. Then it became lower during 9-11 classes of a high school, while remains significant between those young boys and girls who are studying at the primary and secondary levels of professional education. The other observation is that one of sources of inequality in accessing professional education is inequity in accessing high education: family capitals determine to large extend the accessibility of a good high school for a child.

8.5. Family and school: distinctions between students of different levels of professional education.

As we saw above, among schoolboys and schoolgirls there is considerable differentiation of educational intentions depending, first of all, on the school type and on the

settlement type, and also on the family capital (incomes, parents' education, etc.). How educational intentions are realized in real life? Are these social distinctions softened or aggravated in the future? If incomes, education and occupation of parents, and also school type are true barriers not only for equality of intentions, but also for real equal access to different levels of professional education, that means that the current Russian education system does not represent a channel of social mobility but, on the contrary, it fixes existing social differentiation of families.

Let us compare three groups of surveyed people – students in establishments of primary, secondary and higher professional education, and also the control group (pupils of 10-11 classes of high schools) by basic characteristics of their families and schools (table A2.3 in Appendix). As one can see, key parameters of group of pupils and those of group of higher schools students are very close which confirms some sort of continuity. Namely, those who continue their study in years 10-11, are aimed to be enrolled in higher schools and their chances are good enough.

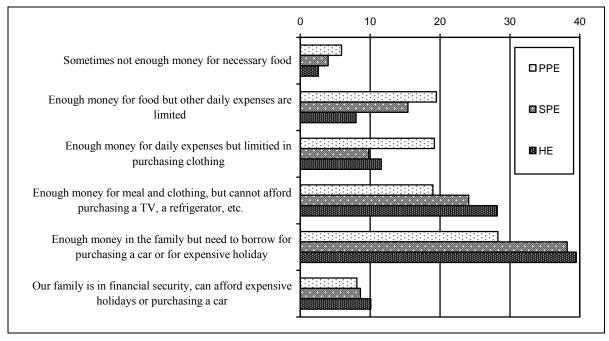


Figure 8. How would you estimate the well-being of your parents? (%)

The first group is the group of students of higher schools. Among these students girls prevail (62%). Though almost three quarters of them have siblings, this proportion is a little bit less than the one in the groups of pupils of secondary professional education and of technical training colleges (primary professional education). Approximately one fifth of students has no father (as well as in group of pupils of 10-11 classes), but this proportion is less than in the second and especially in the third group. Distinctions in parents' education between three groups are great: most of students of higher schools (72%) have at least one of their parents with higher education, and still a quarter have at least one of parents with

secondary professional education. Employment of students' mothers is typical enough: the proportion of unemployed and also of workers is lower than in other groups, and the proportion of professionals and of enterprises heads is higher. Their mothers work in science, education, public health services and culture. The structure of the employment of fathers is close to the mothers' one: the share of workers is low, the share of professionals and of enterprises heads is large. The difference in the structure of branches of economy where they are employed is less essential, but more fathers works in public sphere and in informational and financial services. It is obvious enough that this group of students is the richest: 80% of families have got computer, half of them estimate their financial well-being as high enough (in a technical training college only 36% of students make the same estimation). The cultural distinctions (measured as the difference of home library size) between groups are essential too: parents of these students have much more books that other ones.

Distinctions on types of schools also look considerable. 40% of students of higher schools have graduated from a grammar school, a lycée (college) or a school with profound study of some courses. 53% studied in specialized school or in specialized class. As a rule, there were good schools in which more than 70% of graduates are enrolled in higher school. Though in this group the percentage of those who has graduated from a private school is very low (2,5 %), it doubles the similar parameter in other groups. Every fifth student studied at school at least two foreign languages. 12% were enrolled in educational institutions which had a contract with their schools. Data also testify that the past achievements of students of universities were higher than those of students of technical schools and of technical training colleges: 64% of them had good and excellent marks at high (general) school.

The second group consists of pupils of establishments of primary professional education. This group differs very strongly from the first one, practically by all parameters. Only 39% of these students are girls, a lot of them are from families without a father (24%), they have more siblings than other ones. There are youth whose parents have the lowest education (only third of fathers and of mothers have graduated from higher school) and the lowest professional status (20% of fathers and of mothers are workers). In this group there are few children of professionals and managers, and there are few parents who work in education, sciences, culture and public health services and the finance. It is also characteristic that almost a quarter of pupils could not answer in what branch of economy their parents work. Wellbeing of families in this group of youth is low (45% say that clothes purchase causes them some difficulties, only 50% have computer at home). Almost half of their households possess the library less than 100 books.

90% of pupils in primary professional education had education of only 8 or 9 classes of ordinary school though 25% had some specialization at school. These schools contracts with educational institutions were very seldom. A share of their graduates being enrolled in higher schools is the lowest of three groups. But the half of those who now study in the technical training college had got marks "3" ("satisfactory") even in these bad schools. The way to primary professional education institutions is practically closed to the best pupils.

The third group is the group of students of secondary professional education. Families of these pupils have an intermediate place between two previous groups by their social positions. Family structure (families without father, number of siblings) and well-being self-estimation in this group are close to these ones in the group of students of higher schools. The job and employment of their fathers are similar to these ones in the group of pupils of technical training colleges. Employment of mothers, sphere of their work, education of both parents, the size of home library, the number of computers are approximately in the middle on a scale between the positions of the students of higher schools and those of technical training colleges. The same relates to their high schools (the percent of grammar and specialized schools, and of schools having the contract with Universities is larger, than among second group), and also their progress (about 85% had got at high school "good" and "excellent"). Approximately 50% of these students studied in 10-11 classes.

9. Conclusions

Data of the Monitoring of economics of education and RLMS data unequivocally testify: factors of the family capital (first of all incomes and an educational level of parents) represent an essential barrier of educational possibilities of graduates of high schools. The existing social inequality of children' families is fixed and aggravated in high school as children of poorer and less educated parents, as a rule, study at bad schools and have lower educational successes. Therefore at schools there is a considerable inequality even of educational intentions (for pupils of 8-9 classes): children from families with higher social positions are going to receive full secondary education and then to study in universities, while children from families with low family capital are limited by the general secondary education and then study in technical colleges.

Self-restrictions of educational aspirations are shown in distinctions of a social origin of groups of pupils in different levels of professional education (primary, secondary and higher): the higher the level of education is, the higher are social positions of students' parents, the better are the schools in which these students study. However, besides the social origin, pupils of three levels of the Russian professional education are differentiated depending on the purposes of education aims, their labor motivation and expectations for their

future work. These distinctions are especially sharp when we consider students of the higher and primary professional education.

Today the system of the Russian professional education is, to large extend, the mechanism of fastening the existing social inequality rather than of social mobility. It is even transparent when we consider higher and primary professional education. Pupils of primary professional education are children who have graduated from bad schools, whose parents have low social status, they have humble expectations for their future work. Students of universities are children of parents with high social status, they graduated from much better schools, and have considerable claims about their future job. Pupils of secondary professional education are grown 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 Russian social hierarchy the establishments of primary professional education and 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 establishments of secondary professional education look like a ladder to the next «social level» giving their students the possibility to be enrolled in higher education institution and then to get good employment.

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Appendix 1. RLMS data.

Table A1.1. Distribution of potential labor force in Russia by age and the level of education, % (RLMS, 2006)

Education of the respondent	16-20	21-25	26-30	31-40	41-50	51-60	Average
No secondary education and not							
studying now	12,7	14,2	12,4	7,7	4,9	10,8	9,5
Currently studying at high school	23,5	0	0	0	0	0	2,2
Secondary education (the high school							
certificate)	9,6	14,0	13,3	16,7	19,9	19,5	16,6
Primary professional education							
(studying now or has the diploma)	24,2	22,0	26,1	25,1	28,0	21,0	24,6
Secondary professional education							
(studying now or has the diploma)	26,1	19,9	17,3	23,5	25,0	26,3	23,4
Higher education (studying now or has							
the diploma)	4,0	29,9	31,0	27,0	22,2	22,4	23,6
Total	100	100	100	100	100	100	100

Table A1.2. The level of education of respondents' parents, by respondents' age

groups, % (RLMS, 2006).

8	Age of a respondent						
Education of his/her parents	16-20	21-25	26-30	31-40	41-50	51-60	Average
Education of father when a respondent was 15 years old							
No secondary education	13,6	18,2	20,6	34,9	60,9	70,8	40,6
Secondary education	17,2	13,8	16,3	11,3	6,5	3,5	10,5
Primary professional education	30,4	29,4	24,5	19,4	13,2	8,0	19,2
Secondary professional education	17,9	17,6	19,7	15,6	9,4	7,8	13,8
Higher education	20,8	21,1	18,9	18,8	10,1	10,0	15,8
Total	100,0	100,0	100,0	100,0	100,0	100,0	100,0
Education of mother when a respondent was 15 years old							
No secondary education	10,3	11,6	15,4	30,2	61,1	73,3	38,2
Secondary education	13,8	15,8	17,8	14,3	8,8	6,0	12,1
Primary professional education	19,8	19,1	16,9	14,9	7,0	5,1	12,8
Secondary professional education	29,9	32,2	31,5	25,7	14,8	9,9	22,5
Higher education	26,1	21,4	18,3	14,9	8,2	5,7	14,4
Total	100,0	100,0	100,0	100,0	100,0	100,0	100,0

Table A1.3. The level of education of respondents' parents, by respondents' parents year of birth, % (RLMS, 2006).

		Year of a birth of father \mothers							
		1921-	1931-	1941-	1951-	1961-			
Education of parents	<= 1920	1930	1040	1950	1960	1976	Average		
Education of father when a respondent was 15 years old									
No secondary education	76,0	66,1	50,9	27,1	17,3	12,6	40,7		
Secondary education	2,2	4,5	7,9	13,3	15,7	19,0	10,5		
Primary professional education	5,3	10,7	15,1	21,2	28,2	34,7	19,2		
Secondary professional education	6,8	8,4	11,1	17,7	19,3	17,3	13,8		
Higher education	9,8	10,2	15,0	20,7	19,4	16,3	15,8		
Total	100,0	100,0	100,0	100,0	100,0	100,0	100,0		
Education of mother when a respondent was 15 years old									
No secondary education	84,9	68,8	54,9	25,8	11,9	10,1	38,0		
Secondary education	1,9	7,7	8,5	15,9	18,1	12,9	12,2		
Primary professional education	3,3	5,3	8,5	15,1	18,2	22,0	12,8		
Secondary professional education	4,9	11,8	18,1	25,1	31,4	34,0	22,6		
Higher education	4,9	6,4	10,0	18,1	20,4	21,0	14,4		
Total	100,0	100,0	100,0	100,0	100,0	100,0	100,0		

Table A1.4. The distribution of the level of education of labor-force in Russia by respondents' father education, grouped by age of a respondent (RLMS, 2006).

respond	endents' father education, grouped by age of a respondent (RLMS, 2006). Education of the father when the respondent was 15 years old											
			of the father wh			ears old						
Age of respondent	Educational level of respondent	No secondary education	Secondary education	Primary professional education	Secondary professional education	Higher education	Average					
16-30	No secondary education and not studying now	23,7*	12,1	12,6	4,7	4,4	11,8					
	Currently studying at high school	4,5	7,5	6,9	6,5	7,9	6,6					
	Secondary education (the high school certificate)	15,8	14,2	10,5	10,0	9,4	11,9					
	Primary professional education (studying now or has the diploma)	27,6	27,3	31,7	14,7	9,6	23,3					
	Secondary professional education (studying now or has the diploma)	16,4	23,8	22,3	28,6	15,3	21,3					
	Higher education (studying now or has the diploma)	12,0	15,2	16,2	35,5	53,4	25,1					
	Total	100,0	100,0	100,0	100,0	100,0	100,0					
31-45	No secondary education and not studying now	9,0	5,1	7,3	3,0	1,1	6,1					
	Secondary education (the high school certificate)	22,2	17,6	11,9	13,2	11,6	16,8					
	Primary professional education (studying now or has the diploma)	33,2	25,4	28,2	15,9	10,2	25,3					
	Secondary professional education (studying now or has the diploma)	21,7	29,8	29,4	28,4	17,2	24,1					
	Higher education (studying now or has the diploma)	13,9	22,1	23,2	39,5	59,9	27,6					
	Total	100,0	100,0	100,0	100,0	100,0	100,0					
45-60	No secondary education and not studying now	9,6	3,1	3,1	2,0	1,3	7,3					
	Secondary education (the high school certificate)	22,1	16,3	13,3	17,3	11,3	19,7					
	Primary professional education (studying now or has the diploma)	27,1	13,3	20,4	7,1	7,0	22,4					
	Secondary professional education (studying now or has the diploma)	27,0	31,6	32,9	31,6	17,0	27,1					
	Higher education (studying now or has the diploma)	14,3	35,7	30,2	41,8	63,5	23,5					
	Total	100,0	100,0	100,0	100,0	100,0	100,0					
* Here a	nd after significant difference	s from the av	erage are marke	d with grey co	olor							

Table A1.5. The distribution of the level of education of labor-force in Russia by respondents' mother education, grouped by age of a respondent (RLMS, 2006).

respond	espondents' mother education, grouped by age of a respondent (RLMS, 2006). Education of the mother when the respondent was 15 years old											
<u> </u>			of the mother w		ı .	years old						
Age of respondent	Educational level of respondent	No secondary education	Secondary education	Primary professional education	Secondary professional education	Higher education	Average					
16-30	No secondary education and not studying now	27,4	15,5	13,7	9,3	2,8	12,5					
	Currently studying at high school	4,6	5,1	6,0	5,8	10,7	6,5					
	Secondary education (the high school certificate)	12,0	17,5	13,0	10,0	11,4	12,4					
	Primary professional education (studying now or has the diploma)	28,6	26,9	36,8	20,1	11,6	24,0					
	Secondary professional education (studying now or has the diploma)	15,2	21,8	19,7	25,1	17,4	20,6					
	Higher education (studying now or has the diploma)	12,2	13,3	10,8	29,8	46,1	24,0					
	Total	100,0%	100,0	100,0	100,0	100,0	100,0					
31-45	No secondary education and not studying now	9,6	7,8	5,8	3,1	,8	6,2					
	Secondary education (the high school certificate)	21,7	18,3	13,4	14,3	11,8	17,2					
	Primary professional education (studying now or has the diploma)	32,5	26,9	33,2	20,4	8,9	25,9					
	Secondary professional education (studying now or has the diploma)	23,3	25,5	24,7	27,7	16,6	23,9					
	Higher education (studying now or has the diploma)	12,9	21,5	23,0	34,5	61,8	26,7					
	Total	100,0%	100,0	100,0	100,0	100,0	100,0					
45-60	No secondary education and not studying now	10,6	2,7	3,4	1,3	2,3	8,1					
	Secondary education (the high school certificate)	21,9	15,8	13,5	16,2	10,3	19,7					
	Primary professional education (studying now or has the diploma)	26,7	14,8	25,0	11,4	7,4	22,9					
	Secondary professional education (studying now or has the diploma)	26,1	35,5	31,8	30,6	12,6	26,6					
	Higher education (studying now or has the diploma)	14,7	31,1	26,4	40,4	67,4	22,6					
	Total	100,0	100,0	100,0	100,0	100,0	100,0					

Table A1.6. Distribution of labor-force in Russia by parents' membership in the Communist Party before 1991, grouped by respondents' age (RLMS, 2006).

Age of	unist Party before 1991, ¿ 	ř	ner' members		Mother				
respon- dent	Educational level of respondent	No, was not a member		Average	No, was not a member	Yes, was a member	Average		
16-30	No secondary education and not studying now	13,8	5,4	12,6	13,6	8,4	13,1		
	Currently studying at high school	7,4	2,3	6,7	7,0	3,1	6,6		
	Secondary education (the high school certificate)	12,8	10,6	12,5	12,8	10,7	12,6		
	Primary professional education (studying now or has the diploma)	24,5	18,1	23,6	24,0	19,9	23,6		
	Secondary professional education (studying now or has the diploma)	21,2	18,9	20,9	20,6	20,3	20,6		
	Higher education (studying now or has the diploma)	20,3	44,7	23,6	22,0	37,5	23,5		
	Total	100,0	100,0	100,0	100,0	100,0	100,0		
31-45	No secondary education and not studying now	7,4	3,3	6,5	6,7	5,9	6,6		
	Secondary education (the high school certificate)	18,2	14,6	17,4	17,7	12,5	17,2		
	Primary professional education (studying now or has the diploma)	27,6	20,2	26,0	26,6	21,6	26,1		
	Secondary professional education (studying now or has the diploma)	24,3	22,2	23,9	23,8	24,5	23,9		
	Higher education (studying now or has the diploma)	22,5	39,7	26,2	25,2	35,5	26,2		
	Total	100,0	100,0	100,0	100,0	100,0	100,0		
45-60	No secondary education and not studying now	9,6	4,0	8,1	8,8	4,0	8,5		
	Secondary education (the high school certificate)	21,4	15,6	19,9	20,3	16,8	20,0		
	Primary professional education (studying now or has the diploma)	25,3	16,6	23,0	23,4	17,3	23,0		
	Secondary professional education (studying now or has the diploma)	26,1	27,9	26,6	26,6	24,8	26,5		
	Higher education (studying now or has the diploma)	17,6	35,8	22,3	20,9	37,1	22,1		
	Total	100,0	100,0	100,0	100,0	100,0	100,0		

Table A1.7. Estimation results of the factors influencing education of an individual

Independent variables	Coef.	RRR	P>z	Coef.	RRR	P>z	
	No sec	ondary edi	ucation	General	General secondary ed		
Age							
51-60 (base outcome)							
21-25	1,223	3,399	0,000	0,017	1,018	0,921	
26-30	1,127	3,087	0,000	0,080	1,084	0,628	
31-40	0,507	1,660	0,003	0,238	1,269	0,074	
41-50	-0,648	0,523	0,000	0,126	1,135	0,301	
Male	1,018	2,768	0,000	1,001	2,720	0,000	
Nationality				,	,		
Russian (base outcome)							
Ukrainian, Byelorussian, Moldavian	-0,107	0,898	0,827	-0,329	0,720	0,405	
nationalities of the North Caucasus	-0,600	0,549	0,050	0,561	1,753	0,008	
small nationalities of the Volga region		/		,		,	
and the north	-0,306	0,736	0,354	0,381	1,464	0,090	
Tatars, Bashkirs	-0,319	0,727	0,346	-0,203	0,816	0,421	
other European	-0,406	0,666	0,472	0,261	1,299	0,484	
Other not European	0,199	1,220	0,586	-0,052	0,949	0,872	
Father wasn't a member of the CPSU	0,660	1,934	0,000	0,251	1,285	0,025	
Mother wasn't a member of the CPSU	-0,271	0,763	0,221	0,081	1,085	0,617	
Father's education							
Higher education (base outcome)							
No secondary education	1,839	6,290	0,000	1,418	4,127	0,000	
Secondary education	1,116	3,051	0,001	0,911	2,487	0,000	
Primary professional education	1,305	3,689	0,000	0,669	1,952	0,000	
Secondary professional education	0,279	1,322	0,409	0,518	1,679	0,003	
Mother's education				,	Í		
Higher education (base outcome)							
No secondary education	2,955	19,193	0,000	1,248	3,483	0,000	
Secondary education	2,338	10,362	0,000	1,113	3,045	0,000	
Primary professional education	2,119	8,321	0,000	0,964	2,621	0,000	
Secondary professional education	1,400	4,057	0,000	0,446	1,562	0,007	
Age of father at a birth of a respondent	-0,022	0,978	0,133	-0,024	0,977	0,039	
Age of mother at a birth of a respondent	0,006	1,006	0,703	0,012	1,012	0,349	
Place of birth of a respondent (type)	,			,	,	,	
City (base outcome)							
Settlement	0,078	1,081	0,703	0,091	1,095	0,530	
Village	0,851	2,343	0,000	0,517	1,677	0,000	
Place of birth of a respondent (republic of URSS)	.,	,	.,	- /-	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	.,	
Russia (base outcome)							
Ukraine, Belarus, Moldova	-0,243	0,784	0,551	-0,522	0,593	0,107	
Transcaucasia	0,633	1,884	0,220	0,191	1,210	0,620	
Baltic, other countries	-0,788	0,455	0,461	0,336	1,399	0,483	
Asia	0,097	1,102	0,765	-0,131	0,878	0,590	
Constant	-5,547	,	0,000	-2,818	,	0,000	

Estimation method used is multinomial logistic regression.

Dependent variable is education of the respondent.

«Higher education (has the diploma or is studying now)» is the base outcome.

Sample: Russian population 21-60 years old. (RLMS, 2006)

Significant coefficient are marked with bold type.

Table A1.7 Continued.

Independent variables	Coef.	RRR	P>z	Coef.	RRR	P>z
		ary profes			y professiona	
			oloma or is	(has a d	iploma or is	currently
	curi	ently stud	ying)		studying)	1
Age						
51-60 (base outcome)						
21-25	0,713	2,040	0,000	-0,109	0,896	0,461
26-30	0,796	2,217	0,000	-0,262	0,770	0,072
31-40	0,722	2,058	0,000	0,090	1,095	0,439
41-50	0,498	1,646	0,000	0,025	1,026	0,816
Male	1,153	3,169	0,000	0,058	1,060	0,463
Nationality						
Russian (base outcome)						
Ukrainian, Byelorussian, Moldavian	-0,030	0,970	0,927	-0,482	0,618	0,123
nationalities of the North Caucasus	-1,672	0,188	0,000	-0,444	0,641	0,053
small nationalities of the Volga region	0.207	1 222	0.100	0.001	0.000	0.007
and the north	0,287	1,333	0,180	-0,001	0,999 0,623	0,997 0,048
Tatars, Bashkirs	-0,255	0,775	0,273	-0,473	'	
other European Other not European	-0,336 -0,280	0,715	0,397	-0,201	0,818	0,574
Father wasn't a member of the CPSU	-0,280 0,197	0,756 1,218	0,363 0,060	-0,311 0,189	0,732 1,208	0,296 0,045
Mother wasn't a member of the CPSU	-0,150	0,861	0,300	-0,130	0,878	0,043
	-0,130	0,801	0,300	-0,130	0,878	0,317
Father's education						
Higher education (base outcome)	1 007	((((0.000	1.057	2.024	0.000
No secondary education	1,897	6,666	0,000	1,076	2,934	0,000
Secondary education	1,324	3,757	0,000	0,978	2,658	0,000
Primary professional education	1,494	4,457	0,000	0,948	2,580	0,000
Secondary professional education	0,518	1,679	0,004	0,659	1,933	0,000
Mother's education						
Higher education (base outcome)	1.557	<i>5.</i> 500	0.000	1.016	2.727	0.000
No secondary education	1,756	5,789	0,000	1,316	3,727	0,000
Secondary education	1,370	3,936	0,000	1,207	3,344	0,000
Primary professional education	1,669	5,308	0,000	1,089	2,971	0,000
Secondary professional education	0,679	1,971	0,000	0,746	2,109	0,000
Age of father at birth of the respondent	-0,018	0,983	0,101	0,006	1,006	0,573
Age of mother at birth of the respondent	0,013	1,013	0,279	-0,018	0,982	0,098
Place of birth of a respondent (type)						
City (base outcome)	0.042	1.044	0.752	0.260	1 207	0.021
Settlement	0,043	1,044	0,752	0,260	1,297	0,031
Village Place of birth of a respondent (republic of	0,421	1,524	0,000	0,245	1,277	0,009
USSR)						
Russia (base outcome)						
Ukraine, Belarus, Moldova	-0,259	0,772	0,352	0,162	1,175	0,509
Transcaucasia	0,539	1,713	0,169	0,533	1,705	0,124
Baltic, other countries	-0,091	0,913	0,859	-0,399	0,671	0,407
Asia	-0,330	0,719	0,166	0,159	1,173	0,413
Constant	-3,650	-,,-/	0,000	-1,568	1,1,5	0,000
Number of obs	6239		3,300	1,000		-,,,,,,
LR chi2(104)	2093,4					
Prob > chi2	0,000					
Log likelihood	-8536,5					
Pseudo R2	0,109					

Table A1.8. Estimation results of the factors influencing the level of education, by age groups.

Table A1.8. Estimation results of the	Age	Age	Age	Age	Age	Age
	21-30	31-45	46-60	21-30	31-45	46-60
	No sec	condary edu	cation	General	secondary e	ducation
Age	0,981	0,846***	1,087***	1,025	0,975	0,959**
Male	3,708***	3,558***	1,881***	3,593***	3,100***	2,115***
Nationality						
Russian (base outcome)						
Ukrainian, Byelorussian, Moldavian	1,790	0,580	1,088	0,294	0,254	2,481
nationalities of the North Caucasus	0,362	0,444	1,083	1,722	1,838*	1,564
small nationalities of the Volga region						
and the north	0,729	0,338	1,220	0,751	1,130	2,246
Tatars, Bashkirs	0,915	0,553	0,772	0,169*	1,139	0,826
other European	0,183	0,882	1,206	0,185	1,810	1,934
Other not European	0,914	1,434	1,171	1,049	0,975	0,613
Father wasn't a member of the CPSU	1,770*	1,433	2,573***	1,203	1,109	1,516**
Mother wasn't a member of the CPSU	0,946	0,659	0,908	1,192	1,067	1,066
Education of the father						
Higher education (base outcome)						
No secondary education	4,71***	10,90***	7,006**	6,040***	3,537***	3,486***
Secondary education	2,49**	4,98**	3,434	4,442***	2,406***	1,270
Primary professional education	2,649	9,30***	2,519	3,067***	1,940**	1,271
Secondary professional education	0,975	2,386	1,963	2,175**	1,478	1,857*
Education of mother						
Higher education (base outcome)						
No secondary education	22,73***	26,45***	5,859**	2,008*	3,824***	4,287***
Secondary education	17,58***	9,86***	1,852	3,202***	2,739***	3,488***
Primary professional education	18,84***	4,71**	3,117	3,967***	2,134	2,224
Secondary professional education	5,385***	3,494*	1,180	1,133	1,678**	2,105**
Age of father at a birth of the respondent	0,999	0,940**	0,982	0,982	0,961**	0,982
Age of mother at a birth of the respondent	0,987	1,004	1,035	1,009	1,004	1,025
Where the respondent was born			Í	•	,	
City (base outcome)						
Settlement	1,377	0,982	0,980	1,512	0,985	1,049
Village	2,610***	1,484*	3,122***	1,812***	2,255***	1,268
Where the respondent was born (in URSS)	,			,	,	Ź
Russia (base outcome)						
Ukraine, Belarus, Moldova	0,529	1,358	0,581	1,819	0,937	0,276***
Transcaucasia	5,449*	1,323	1,662	2,145	1,166	1,253
Baltic, other countries	1,213	0,000	0,000	1,709	0,489	1,924
Asia	1,399	0,836	1,332	1,443	1,009	0,584
Constant	***	0,050	***	***	1,007	0,501
Constant		1			J	L

Multinomial logistic regressions for age groups. Dependent variable is education of the respondent. «Higher education (has the diploma or is studying now)» is the base outcome. Sample: Russian population 21-60 years old, by age groups. (RLMS, 2006). Only RRR (relative-risk ratios, or $\exp(b)$) are given (if RRR< 1, than b < 0). Significant coefficients are marked with bold type and

^{*} level of significance

^{**} level of significance

^{***} level of significance

Table A1.8. Continued.

	Age	Age	Age	Age	Age	Age
	21-30	31-45	46-60	21-30	31-45	46-60
		professional (iploma or is			dary profes n (has the di	
	(nas the u	studying)	currently		rrenly stud	
Age	1,032	0,993	0,941***	0,957	1,005	0,980
Male	4,074***	2,865***	3,009***	1,496**	0,960	0,942
Nationality	1,074	2,000	3,007	1,170	0,700	0,7 12
Russian (base outcome)						
Ukrainian, Byelorussian, Moldavian	1,267	0,536	2,043	0,637	0,150***	1,628
nationalities of the North Caucasus	0,153***	0,216***	0,188***	0,708	0,785	0,430*
small nationalities of the Volga region	0,100	0,210	0,100	0,700	0,703	0,100
and the north	1,204	1,281	1,499	0,856	0,805	1,377
Tatars, Bashkirs	0,435	0,935	0,811	0,514	0,621	0,707
other European	0,375	1,443	0,285	0,717	0,946	0,900
Other not European	1,023	0,468	0,469	0,559	0,755	0,773
Father was a member of the CPSU	1,216	1,032	1,348*	1,234	1,247	1,146
Mother was a member of the CPSU	1,092	0,765	0,755	1,085	0,752	0,863
Education of the father		ŕ				ĺ
Higher education (base outcome)						
No secondary education	6,534***	6,275***	7,495***	2,976***	2,334***	3,441***
Secondary education	4,684***	3,887***	2,648*	2,888***	2,771***	1,984**
Primary professional education	6,044***	4,312***	3,435***	2,946***	2,400***	2,261***
Secondary professional education	1,996**	1,772**	1,271	2,430***	1,655**	2,035**
Education of mother		,				
Higher education (base outcome)						
No secondary education	5,065***	6,127***	5,911***	2,319**	4,679***	4,246***
Secondary education	4,639***	4,042***	3,774***	3,730***	3,051***	4,494***
Primary professional education	8,825***	4,183***	4,986***	3,592***	2,763***	3,890***
Secondary professional education	1,695**	2,306***	1,806	1,814***	2,254***	2,694***
Age of father at birth of the respondent	1,002	0,987	0,974	1,001	1,015	1,000
Age of mother at birth of the respondent	0,992	0,997	1,037*	0,968	0,965**	1,002
Where the respondent was born						
City (base outcome)						
Settlement	0,830	0,714	1,677**	1,900**	1,029	1,323
Village	1,303	1,272	2,014***	1,321	0,998	1,497***
Where the respondent was born (in						
URSS)						
Russia (base outcome)						
Ukraine, Belarus, Moldova	0.521	1,679	0,374**	1,028	1,377	0,986
, ,	0,521		l			
Transcaucasia	4,504*	1,062	2,157	0,458	1,053	3,231**
Transcaucasia Baltic, other countries	4,504* 0,371	1,062 0,261	2,348	0,902	0,401	0,911
Transcaucasia Baltic, other countries Asia	4,504* 0,371 0,656	1,062 0,261 1,003				
Transcaucasia Baltic, other countries Asia Constant	4,504* 0,371 0,656 ***	1,062 0,261 1,003 ***	2,348 0,325 **	0,902	0,401	0,911
Transcaucasia Baltic, other countries Asia Constant Number of obs	4,504* 0,371 0,656 *** 1549	1,062 0,261 1,003 *** 2420	2,348 0,325** 2270	0,902	0,401	0,911
Transcaucasia Baltic, other countries Asia Constant Number of obs LR chi2(104)	4,504* 0,371 0,656 *** 1549 656,91	1,062 0,261 1,003 *** 2420 882,63	2,348 0,325** 2270 732,25	0,902	0,401	0,911
Transcaucasia Baltic, other countries Asia Constant Number of obs LR chi2(104) Prob > chi2	4,504* 0,371 0,656 *** 1549 656,91 0,00	1,062 0,261 1,003 *** 2420 882,63 0,00	2,348 0,325** 2270 732,25 0,00	0,902	0,401	0,911
Transcaucasia Baltic, other countries Asia Constant Number of obs LR chi2(104)	4,504* 0,371 0,656 *** 1549 656,91	1,062 0,261 1,003 *** 2420 882,63	2,348 0,325** 2270 732,25	0,902	0,401	0,911

Appendix 2. Social differentiation of Russian schoolchindren and students, Monitoring of economics of education, 2006-2008.

Table A2.1. Social differentiation of pupils of high schools (in years 8-11) depending on school type, answers of parents (% of each group).

on school type, answers of parents (% of eac	en group).	G.,	1 1 1		
	Citien		and school t		37:11
	Grammar	the regiona Private	Other	Other	Villages
				towns	
	schools,	schools	schools		
	specialized				
	schools Gender				
Girls	57,2	50,0	50,1	54,1	52,2
	e are brothers		30,1	34,1	32,2
Yes	50,8	57,0	56,5	61,3	75,0
	ber of siblings		30,3	01,3	73,0
Quantity	1,2	1,3	1,2	1,2	1,4
Whether there are	,			1,2	1,7
There is only one of the parents	16,3	11,6	16,9	18,7	17,3
	nts' education		10,7	10,7	17,5
Both parents have no professional education	0,9	1,3	2,6	2,7	8,3
At least one of the parents has secondary	0,2	1,5	2,0	2,7	0,5
professional education	14,2	6,0	28,4	33,4	51,3
At least one of the parents has higher education	84,9	92,6	68,9	63,8	40,5
	er employmen			,-	
Does not work	16,9	23,8	18,3	12,1	21,3
The worker	3,4	1,0	6,6	6,0	15,6
The employee	30,0	17,5	33,4	39,0	31,4
The self-occupied, small businessman	3,4	8,9	4,4	5,1	4,4
The expert	30,9	23,8	25,1	25,4	18,6
The head of division	10,2	12,6	7,3	7,3	3,1
The proprietor of firm, the director	2,5	9,3	1,7	3,0	2,6
Another	1,8	3,0	2,6	2,1	2,0
There is no mother	0,7	0,0	0,6	0,0	1,1
Fathe	er employment	t			
Does not work	3,6	0,7	3,1	3,9	8,3
The worker	7,5	1,7	13,9	18,4	27,6
The employee	16,4	7,3	18,2	22,1	16,9
The self-occupied, small businessman	7,9	9,3	8,3	8,5	8,1
The expert	23,6	13,2	22,9	14,2	12,5
The head of division	14,6	19,2	11,6	9,7	5,7
The proprietor of firm, the director	12,9	38,4	7,0	6,9	3,9
Another	4,0	3,6	7,9	6,0	3,3
There is no father	9,4	6,6	7,2	10,3	13,6
Mother' employment	ent – brunch o	f an econom	ıy		
Industry, building, transport, communication	19,1	13,1	17,0	16,5	12,1
Agriculture, wood, fish	0,5	0,0	1,1	2,4	10,2
Trade, public catering, consumer services	20,5	27,1	26,7	17,9	25,4
Information, law, financial services	14,4	20,5	10,6	7,2	4,5
Science, education, public health services, culture	35,1	28,4	32,8	41,6	34,2
State and municipal management	6,4	4,4	5,7	10,0	7,1
Army, police	1,3	0,9	3,6	4,1	4,5
Other	0,5	1,7	0,5	0,3	0,6
No answer	2,2	3,9	2,0	0,0	1,4
Father' employment		f an econom			
Industry, building, transport, communication	38,9	34,6	43,4	47,2	43,3
Agriculture, wood, fish	1,4	0,4	43,4	4,2	17,1
			·		
Trade, public catering, consumer services	15,4	23,2	13,5	9,9	11,8
Information, law, financial services	13,2	18,2	10,4	3,9	2,0

Science, education, public health services, culture	12,5	8,9	7,4	7,4	3,7
State and municipal management	3,8	2,1	2,2	6,3	3,4
Army, police	7,2	5,0	10,0	13,0	13,5
Other	1,0	0,7	0,6	1,1	0,8
No answer	6,5	6,8	8,4	7,0	4,5
Whether there is	a computer a	t the house			
The child has his own computer	32,8	40,4	27,3	25,7	14,7
He\she uses the computer along with other members					
of a family	52,8	50,7	49,9	40,5	32,7
There are no computer	14,4	8,9	22,8	33,8	52,6
Average fami	ily incomes po	er capita			
Roubles	9899	22504	7770	5298	5018
How would you estimate	e your family	financial po	sition?		
Sometimes not enough money for necessary food	1,7	0,3	1,7	5,1	8,4
Enough money for food but other daily expenses are					
limited	7,4	5,8	11,4	15,1	21,6
Enough money for daily expenses but limitied in					
purchasing clothing	11,1	8,2	18,8	19,9	19,4
Enough money for meal and clothing, but cannot					
afford purchasing a TV, a refrigerator, etc.	33,8	10,9	32,6	33,2	32,9
Enough money in the family but need to borrow for					
purchasing a car or for expensive holiday	36,1	45,9	30,8	22,7	15,5
Our family is in financial security, can afford					
expensive holidays or purchasing a car	9,9	28,9	4,7	3,9	2,2
How many books the					
< 100 books	13,8	9,0	22,6	25,2	40,0
100-250 books	27,8	16,9	26,6	38,2	37,8
250-500 books	26,3	29,6	24,2	24,2	13,2
500-1000 books	18,3	23,3	14,2	9,1	5,7
> 1000 books	13,8	21,3	12,4	3,3	3,3

Table A2.2. Social differentiation of pupils of high schools (in years 8-9) depending on their educational intentions, answers of parents (% of each group).

parents (% of e	eacn group).	T	
	D1		
Coing in viore		Hayan't davided vet	Total
		naven i decided yet	Total
	years 10-11	L	
	39.5	44 3	51,5
		1 1,5	01,0
		62.9	60,0
,		- 7-	
1,2	1,6	1,3	1,3
e are two parents	in the family	,	Í
16,4	21,1	16,2	16,7
Parents' education			
2,4	8,2	9,3	3,9
20,9	52,1	39,5	26,1
76,7	39,7	51,2	70,0
17,2	18,4	21,6	18,0
		/	6,2
			31,0
			4,7
			25,5
		-	8,7
			3,3
			1,7
,		0,0	0,9
		7.2	2.7
		-	3,7 15,1
			16,7
		-	8,0
			17,8
		-	11,2
			12,6
			5,0
			9,9
		, , ,	- 9-
		18 3	16,7
		· ·	2,6
ĺ í		f f	23,8
		1	
10,3	1,6	9,9	9,6
27.0	20.5	20.0	25.4
			35,4
		ŕ	6,8
	· ·		2,3
			0,4
		4,0	2,5
		20.2	40.0
			40,9
· · · · · · · · · · · · · · · · · · ·		· · · · · · · · · · · · · · · · · · ·	4,6
· ·	· ·		16,3
10,2	4,6	11,9	10,0
9,3	0,0	5,2	8,0
4,2	0,0	2,2	3,6
	Going in years 10-11 Gender 54,2 There are brothers 57,9 Tumber of sibling 1,2 The are two parents 16,4 The area of sibling 1,2 The area of sibling 1	10-11 years 10-11 Gender 54,2 39,5 there are brothers or sisters 57,9 76,3 Tumber of siblings 1,2 1,6 e are two parents in the family 16,4 21,1 Parents' education 2,4 8,2	Plans Going in years Not going in years 10-11

Army, police	8,9	10,8	7,4	8,8					
Other	0,9	0,0	1,5	0,9					
No answer	6,2	10,8	8,9	6,9					
Whether there is a computer at home									
The child has his own computer	29,8	25,0	17,4	27,5					
He\she uses the computer along with other									
members of a family	48,9	36,8	37,1	46,1					
There are no computer	21,3	38,2	45,5	26,4					
Average family incom	es per capita (av	erage within a g	roup)						
Rubles	10067	7190	9227	9737					
How do you esting	mate a family fin	ancial position?							
Sometimes not enough money for necessary food	3,4	5,3	3,6	3,6					
Enough money for food but other daily expenses									
are limited	10,6	16,0	13,9	11,5					
Enough money for daily expenses but limited in									
purchasing clothing	14,0	20,0	17,6	15,0					
Enough money for meal and clothing, but cannot									
afford purchasing a TV, a refrigerator, etc.	31,0	30,7	34,5	31,5					
Enough money in the family but need to borrow									
for purchasing a car or for expensive holiday	31,1	18,7	20,6	28,5					
Our family is in financial security, can afford									
expensive holidays or purchasing a car	9,9	9,3	9,7	9,9					
How many book	s there are in you	r home library?							
< 100 books	19,3	38,2	41,3	24,3					
100-250 books	27,7	27,6	24,6	27,2					
250-500 books	23,1	19,7	16,8	21,9					
500-1000 books	15,4	9,2	11,4	14,3					
> 1000 books	14,4	5,3	6,0	12,4					

Table A2.3. Estimation results of factors influencing plans to study in a higher school,

by age groups

by age groups	In years 8-11		In moon	Q A	In years 10-11		
	In year	S 8-11	in year	In years 8-9		s 10-11	
	Coef,	dF/dx	Coef,	dF/dx	Coef,	dF/dx	
School type (base outcome is ordinary school)	,		,		,		
Private school	-0,029	0,005	-0,118	-0,019	-0,001	0,009	
Grammar school or specialized school	0,381***	0,073	0,486***	0,156	0,291**	0,037	
The school has a contract with higher school or	·						
college	0,098	0,015	-0,093	-0,044	0,242*	0,029	
Pupil's progress at school (base outcome is "there							
are unsatisfactory marks")							
"Satisfactory" («3»)	0,350*	0,060	0,510*	0,148	0,307	0,035	
Mainly "good" («4»)	0,929***	0,182	0,911***	0,289	1,006***	0,137	
"Good" and "excellent" only («4» и «5»)	1,295***	0,221	1,259***	0,366	1,418***	0,163	
"Excellent" only («5»)	1,440***	0,123	1,272**	0,241	1,674***	0,077	
Number of additional trainings (on interests) witch							
the pupil attends	0,067***	0,013	0,071**	0,023	0,061**	0,008	
Degree of his knowledge of foreign language	0,174***	0,033	0,210***	0,065	0,155***	0,019	
Frequency of computer use	-0,037	-0,007	-0,133**	-0,044	0,043	0,007	
Frequency of Internet use	0,073***	0,015	0,106**	0,037	0,051	0,007	
Male	-0,062	-0,010	-0,066	-0,014	-0,044	-0,005	
Type of settlement (base outcome is "regional							
center")							
Village	0.00=1.1.1		0.000		-	0.066	
	-0,387***	-0,088	-0,309*	-0,104	0,411***	-0,066	
Town not the regional center	-0,001	-0,003	-0,109	-0,047	0,120	0,015	
Moscow	-0,270***	-0,053	-0,346**	-0,112	-0,195	-0,023	
Mother's education (base outcome is "mother has							
no professional education")	0.174	0.024	0.026	0.007	0.2554	0.022	
has primary or secondary professional education	0,174	0,034	-0,036	-0,007	0,257*	0,033	
has higher or incomplete higher education	0,524***	0,107	0,323	0,104	0,631***	0,091	
Father's education (base outcome is "father has no vocational education")							
,	0.022	0.000	0.005	0.022	0,043	0.002	
has primary or secondary professional education	-0,033	-0,008	-0,095	-0,023		0,003	
has higher or incomplete higher education	0,012	0,002	-0,124	-0,034	0,124	0,016	
At list one of parents is head of enterprise Father has a job	0,069	0,013	0,170	0,050	-0,054	-0,006	
J	0,052	0,009	0,089	0,027	0,037	0,004	
Mother has a job Ln of family income per capita	0,102	0,022	-0,075	-0,017	0,178	0,026	
<u> </u>	0,099*	0,020	0,168**	0,053	0,057	0,008	
There is computer in the house The size of home library (ln)	0,260**	0,053	0,327*	0,098	0,204	0,028	
Family without father	0,097**	0,019	0,127**	0,042	0,079	0,010	
Number of brothers and sisters	-0,042	-0,004	-0,383	-0,110	0,158	0,021	
2007	-0,043	-0,009	-0,051	-0,016	-0,034	-0,005 -0.008	
2007	-0,088	-0,020	-0,141	-0,052	-0,053	- ,	
The child is studying in 10-11 classes	-0,150* 0,782***	-0,031 0,184	-0,279**	-0,100	-0,048	-0,004	
Constant	 	0,164	-2,16***		2 07***		
Number of obs	-2,50*** 2557		864		- 2,07 *** 1693		
LR chi2(**)	716,8		254,050		407,250		
Prob > chi2	0,000		0,000		0,000		
Pseudo R2			0,000				
	0,285		, ,		0,302		
Log likelihood	-898,1	Ī	-404,7	I	-470,9	1	

Method used is probit regression. Dependent variable is equal to 1 if a pupil plans to be enrolled to a higher school, and 0 otherwise. Data: Monitoring of economics of education, 2006-2008.

Significant coefficients are marked with bold type.

^{*} level of significance

^{**} level of significance

^{***} level of significance

Table A2.3. Social differentiation of students in the systems of primary, secondary and higher professional education and of schoolchildren in years 10-11 (% of each group).

higher professional education and of sci				
	Pupils in years			essional education
	10-11	primary	secondary	higher
	Gender			
Girls	55,9	38,7	68,3	61,8
	er there are brothe			
Yes	64,3	76,0	77,9	69,3
	Number of siblir			
Average number	1,3	1,8	1,4	1,3
Whether the	here are two paren			
There is only one parent	16,5	24,2	19,3	15,9
	Parents' educati	on		
Both parents have no professional education	2,3	15,8	6,5	1,9
At least one of parents has secondary				
professional education	27,4	47,6	41,7	25,9
At least one of parents has higher education	70,3	36,6	51,9	72,2
	Mother employm		,	,
Does not work	16,2	22,4	21,0	17,7
The worker	8,0	19,2	7,8	4,8
The employee	31,5	14,9	25,9	23,6
The self-occupied, small businessman	5,0	2,3	3,4	4,3
The expert	24,6	9,3	19,0	28,1
The head of division	8,1	2,0	3,1	7,0
The proprietor of firm, the director	3,5	3,0	4,1	4,3
Another	1,4	1,5	1,8	1,0
Do not know	1,5	22,4	12,2	8,5
There is no mother	0,1	3,1	1,8	0,7
THERE IS NO MOUNCE	Father employm		1,0	0,7
Does not work	5,5	10,1	6,5	5,9
The worker	13,7	20,9	12,5	9,2
The employee	14,3	8,4	17,1	14,8
The self-occupied, small businessman	8,1	2,8	4,9	7,3
The expert	20,7	8,9	15,6	20,0
The head of division	12,3	1,3	5,4	11,2
The proprietor of firm, the director	11,5	2,8	7,0	9,9
Another	0,4	1,3	2,0	0,7
Do not know	4,6	24,8	15,1	12,7
There is no father	9,0	18,5	14,0	8,2
	mployment – brun		14,0	0,2
			12.0	17.0
Industry, building, transport, communication	16,2	15,8	12,8	17,0
Agriculture, wood, fish	2,8	8,2	3,8	2,0
Trade, public catering, consumer services	22,6	25,6	24,4	19,9
Information, law, financial services	12,7	4,2	9,3	9,3
Science, education, public health services,				
culture	35,5	9,8	22,7	30,9
State and municipal management	5,2	4,4	6,5	7,6
Army, police	2,7	2,0	2,3	2,7
Other	0,7	0,2	0,6	0,6
No answer	1,7	29,8	17,5	9,9
	nployment – brunc		17,0	7,7
Industry, building, transport, communication	Ť Ť		22.0	40,5
	42,1 5,5	36,4	33,9	3,8
Agriculture, wood, fish		8,8	7,4	ŕ
Trade, public catering, consumer services	13,2	6,7	10,9	11,6
Information, law, financial services	9,0	3,5	5,1	6,5
Science, education, public health services,			<u> </u>	
culture	9,6	1,9	4,9	9,0
State and municipal management	3,9	3,5	4,9	4,6

Army, police	8,8	5,6	7,6	5,8			
Other	0,8	0,2	1,0	0,6			
No answer	7,0	33,4	24,2	17,5			
Whether there is a computer at home							
The child has his own computer	36,4	27,8	31,7	51,1			
He\she uses the computer along with other							
members of a family	44,2	18,2	27,6	29,2 19,7			
No, there is no computer	19,4	54,0	40,7	19,7			
Averag	ge family income	per capita					
Rubles	8451	10111	9861	11559			
How do you e	stimate a family	financial position					
Sometimes not enough money for necessary food		5,9	4,0	2,6			
Enough money for food but other daily expenses							
are limited	12,2	19,5	15,4	8,0			
Enough money for daily expenses but limitied in							
purchasing clothing	18,5	19,2	9,8	11,6			
Enough money for meal and clothing, but cannot							
afford purchasing a TV, a refrigerator, etc.	30,8	19,0	24,1	28,2			
Enough money in the family but need to borrow							
for purchasing a car or for expensive holiday	27,7	28,3	38,2	39,5			
Our family is in financial security, can afford							
expensive holidays or purchasing a car	7,2	8,1	8,6	10,1			
	books there are in						
< 100 books	18,0	48,1	27,2	15,2			
100-250 books	31,6	21,9	27,0	26,5			
250-500 books	25,7	16,8	26,4	28,3			
500-1000 books	15,0	7,2	13,0	18,4			
> 1000 books	9,7	5,9	6,4	11,6			

Table A2.4. Differentiation of high schools which students in the systems of primary, secondary and higher professional education have finished (% of each group).

secondary and nigher projessional education have finished (70 of each group).			
	Students		
	Primary	Secondary	Higher education
	professional	professional	
	education	education	
How many classes of high school have you finished?			
8-9 classes	92,7	54,8	-
What was the type of school which you have finished (or which you have left)			
College, lycée	2,5	3,9	10,6
Grammar school	5,8	6,8	14,2
School with profound studying of some courses	6,0	10,7	14,4
Ordinary school	85,4	77,9	60,1
Other	0,3	0,7	0,7
Whether there was a specialization at class or at school			
Yes, there was	25,7	35,1	52,9
How many foreign languages have you studied at school?			
You did not study foreign language	2,2	1,6	1,0
You studied one foreign language	87,7	88,1	79,1
You studied two or more foreign languages	10,1	10,3	20,0
Whether there was a contract between the school and other educational institution (higher school,			
college, etc.)			
Yes, but you did not study in specialized class	6,3	9,3	12,7
Yes, you studied in specialized class	2,5	4,4	12,0
There was no contract	38,2	48,1	46,1
I do not know	53,0	38,2	29,2
What marks had he/she got during the last year at school			
Some unsatisfactory marks	1,8	0,2	1,0
"Satisfactory" («3»)	50,3	16,4	6,4
Mainly "good" («4»)	36,3	43,0	28,7
"Good" and "excellent" only («4» и «5»)	10,6	36,6	50,4
"Excellent" only («5»)	1,0	3,7	13,6
What proportion of graduates of your school has been enrolled to higher school in the same year when			
leaving high school?□			
Average %	47,0	59,8	72,6