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This paper looks at the effect of parental occupational status on their children's occupational status and earnings in Russia. The analysis based on twelve surveys conducted from 1991 to 2011 (n=21,639) demonstrates a statistically significant effect of parental occupational status on respondents' occupational status and earnings even after controlling for respondents' education. Contrary to previous findings (Gerber and Hout 2004), the association between social origins and destinations did not strengthen over time. The size of the effect of parental status in Russia is similar to other European countries. A separate analysis shows that monetary returns on higher education increased in post-Soviet Russia, while returns on higher education in terms of occupational status decreased.

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A century ago Russia was a highly stratified society with distinct groups of aristocracy, clergy, merchants, urban intelligentsia, industrial workers and peasants. Although some degree of social mobility existed (Mironov and Eklof 2000), the differences between social groups were clearly defined both in terms of economic resources and social status. One of the first decrees passed by the Bolsheviks in November 1917 abolished all estates, ranks and titles and proclaimed all individuals in the new Soviet Republic to be equal citizens. Following the Marxist dogma, the Bolsheviks aimed to create a classless society, in which all economic bases for social inequality would be removed. A system of 'proletarian dictatorship' was established that discriminated against members of the former privileged classes of aristocracy, clergy and bourgeoisie. Some of them died during the Civil War, but many others left Russia. According to different estimates, the number of emigrants varied between 1 and 3 million (McKeown 2004). Some of those who stayed were prosecuted in the 1920s and 1930s.

Were the equalizing policies of the early Soviet state successful? To some extent, the answer is "yes" as the physical removal of the former privileged classes allowed rapid educational and social mobility for a considerable number of individuals with peasant and working class backgrounds (Fitzpatrick 1979). The industrialization of the 1930s led to a massive migration of agricultural workers to cities and transformed Russia into an industrial society. On the other hand, social inequalities hardly disappeared. As early as in 1937, Trotsky noticed: "The thousand-year-old caste barriers defining the life of every man on all sides – the polished urbanite and the uncouth muzhik, the wizard of science and the day labourer – have not just been preserved from the past in a more or less softened form, but have to a considerable degree been born anew, and are assuming a more and more defiant character."

Unfortunately, there is limited data available for social researchers to quantitatively assess the inequality present in Soviet society. Official Soviet statistical publications only provide data on the proportions of workers, peasants and white-collar workers, without giving any indication of the more detailed occupational structure and degree of inequality within those groups. However, early studies based on the secondary analysis of some rudimentary statistics published in the USSR as well as qualitative evidence undoubtedly indicate the presence of considerable stratification and inequality in the post-war Soviet society (Connor 1979; Dobson 1977; Yanowitch 1977).

The collapse of the USSR in 1991 and Russia's transition to a market economy dramatically widened existing inequalities (Gerber and Hout 1998). In contemporary Russia income inequality is larger than in most European countries and is comparable to the US (Gorodnichenko, et al. 2010). Status inequalities are also large, and the Soviet rhetoric on the

moral value of social equality has long been abandoned.

Within a century, Russia has made a full circle: from an imperial society with its traditional structures of inequality to the equalizing Soviet experience and then to the re-emergence of substantial and visible inequality in the course of market transformation. This historical path is clearly different from other European societies, which makes Russia an interesting case to study the effect of changing institutions on the structures and extent of social inequality.

Education, occupation and intergenerational transmission of inequality in Russia

The association between parental occupational class/status and the education and occupational class/status of their children is a central problem in social stratification research. In contemporary societies, education is probably the main channel for the transmission of social advantage across generations. It is a widely established empirical fact that individuals with a more privileged social background have better access to the educational system, especially in the tertiary education sector. As education is the main factor that determines access to occupations with higher earnings and social prestige, this translates into advantages in the labour market.

Are there any other channels (apart from education) for the transmission of social advantage from parents to children? Statistically, we can establish this effect by comparing labour market outcomes of people with the same level of education, but with different social backgrounds. If the outcomes differ, that would mean some social advantage passes from one generation to another outside the educational system.

It is not my aim in this paper to review and develop theories that exist in the field of social stratification to explain the association in the ‘triangle’ of parental occupation and their children’s education and occupation. This has been done before (see a comprehensive review in Breen and Jonsson 2005; also see Shavit and Blossfeld 1993; Shavit and Muller 2008). This paper is part of the cross-national project “Level and inequality in educational returns in Europe” (EDUREU), and the theoretical review will form a separate part of this project. In this working paper, I mostly present empirical results for Russia, starting with a country-specific literature review.

Little quantitative research has been done on the mechanisms of intergenerational economic and social resource inheritance in Russia. There have been only two studies of intergenerational social mobility that applied modern statistical methods to survey data. In the first attempt to quantify the degree of social fluidity in Soviet society, based on a small survey (about 2000 respondents) conducted in Russia in 1991, Marshall et al. (1995) did not find substantial differences in the strength of association between parental and own class in Russia and Britain

(at least for men, for women the association in Russia was somewhat weaker). Controlling for education did not explain away the association between origins and destinations. As the survey was conducted in 1991, the results demonstrated significant intergenerational transmission of social status in the USSR.

In a larger study, Gerber and Hout (2004) compared Russian social fluidity in the early and late 1990s. They found that the association between social origins and destinations strengthened in post-Soviet Russia, making the society less fluid. The mechanism that accounted for this change was downward intragenerational mobility. Socially mobile individuals with a working class background returned to manual occupations in the course of the economic and social transformation. The latest survey used in Gerber and Hout's paper was conducted in 2000. There have been no studies of social mobility in Russia in the last 13 years that used modern statistical methods and were published in English. Some Russian scholars explored the issue (Shkaratan and Yastrebov 2012; Chernysh 2005); however, the methods and occupational classifications used in those studies make them hardly compatible with the international literature. While we know that intergenerational transmission of social advantage existed in Russia and the association between origins and destinations probably strengthened in the post-Soviet period, direct comparisons with other countries are impossible as comparative studies have not been conducted (apart from Marshall's study that was rather inconclusive). Also, there are no quantitative studies of the effect of parental social background on individual labour market outcomes such as earnings.

In other studies, Gerber unpacked the association between the social class of parents and children by looking at the dynamics of the association between parental background and their children's education and the transition from education to employment. In the post-Soviet period (up to 2000), origin-based inequalities in access to secondary schools (10th grade) increased, while the effect of parental background on access to higher education was ambiguous (Gerber 2000). Another study did not find much change in the strength of the association between education and first occupational class over time (Gerber 2003). Generally, these results suggest stability in the patterns of social stratification in Russia despite radical institutional change.

There are other characteristics of the labour market in Russia that would help place the effects of parental background in context. As already mentioned, earnings inequality dramatically widened after the collapse of the USSR (Gorodnichenko et al. 2010). If before the market transition income inequality only partially reflected the inequality in life chances of individuals and households (as some of it assumed non-monetary forms), in the 1990s monetary income became more important. Once the Soviet system of compulsory job allocation of the graduates of

universities and vocational schools collapsed and the administrative setting of salaries (favouring industrial workers) was abandoned, returns on education increased. In a meta-analysis, Lukyanova (2010) estimated that earnings returns on one year of education rose from 4-5% in the beginning of the 1990s to 8% in the 2000s, when they stabilized at the average OECD level.

The educational and occupational structure in Russia in the 1990s and 2000s

What were the dynamics of the educational and occupational structure in post-Soviet Russia? Table 1 presents descriptive statistics for education and occupational class, measured according to the European Socio-Economic Classification (ESEC), separately for men and women aged 30 to 64, at three points in time: 1989 or 1994, 2002 and 2010. The data for this descriptive analysis come from three Russian censuses conducted in 1989, 2002 and 2010, and the Russia Longitudinal Monitoring Survey (RLMS-HSE).

The educational system in Russia is comprised of several levels. Education up to 9th grade in secondary school is compulsory. Upon completing 9th grade pupils can remain in secondary school for two more years and receive general secondary education or enter a vocational school. Some vocational schools offer lower vocational education that usually lasts for two years and is mostly an educational track for certain categories of manual workers. Others offer specialized secondary degrees (four years of education as a rule) that are required for such occupations as nurses, primary school teachers, technicians, etc. One can enter higher education either after finishing 11th grade in an academic secondary school or after completing a specialized secondary degree in a vocational school (the latter is a less frequent track).

As follows from Table 1, the post-Soviet period distribution of educational qualifications in the working age population changed quite significantly. The cohorts with on average lower levels of education left the labour market, while in the younger cohorts the proportion of people with higher education increased. Whereas in 1989 32% of men and 37% of women aged 30 to 64 had only up to 9 years of school education, in 2010 these numbers went down to 10% and 7%, respectively. The proportion of people with lower vocational degrees also decreased, while the share of people with secondary specialized and university education increased. Note the dynamics of gender inequality in access to higher education. The proportions of men and women holding university degrees were about equal in 1989. By 2010, 29% of women in the 30 to 64 age group had higher education, compared to 24% of men. There were also differences in the types of vocational degrees among men and women, particularly in 1989 and 2002. Men were more likely to get a lower vocational education, sufficient for industrial workers. Women more often attended vocational schools that offered specialized secondary education and prepared them for occupations in sales and services, intermediate and lower professional and managerial

occupations.

While the educational system continued expanding, the occupational structure in the 1990s and 2000s remained more stable (see Bian and Gerber 2007). The proportion of professionals and managers in the labour force did not change much between 1994 and 2010. There was some reduction in the share of lower technical (mainly skilled industrial) workers as a consequence of the post-Soviet industrial crisis. A simultaneous increase in the proportion of the sales and services labour force and those in intermediate occupations also happened due to the expansion of the service sector in the economy. While there was little change in the structure of big occupational classes, within those classes there was considerable occupational mobility. Sabirianova (2002) estimated that between 1991 and 1998 42% of employed respondents changed their occupation, a significantly larger number compared to the six-year period before 1991. Downward occupational mobility increased.

Two characteristics distinguish the Russian occupational structure from more economically developed post-industrial countries. First, there is a larger proportion of routine occupations in the labour force and a smaller salariat. For example, in 2005 in the UK higher and lower professionals and managers constituted 39% of the employed population aged 16 to 64 (for men) or 16 to 59 (for women) - excluding students, people who never worked and could not be classified, and routine workers constituted 11% (Hall 2006). In Russia in 2010, according to the Table 1 estimates, 19% of the population were professionals and managers among men, and 38% among women (in the age group 30 to 64). 41% of men and 19% of women were employed in routine occupations. The second and perhaps more interesting characteristic is the gender imbalance. A greater proportion of women are in the professional and managerial class, especially among lower managers and professionals that include traditionally female occupations such as nurse, schoolteacher and accountant. There are also more women in intermediate occupations (for instance, office secretaries) and in lower sales and services (cashiers, salespersons, etc). On the other hand, the industrial working class (lower technical occupations in Table 1) is overwhelmingly male, and there are more men in routine occupations, too (drivers, construction workers, etc). The average socio-economic index (ISEI) is higher for women than for men. However, this does not translate into a reversed gender gap in earnings as women's average monthly earnings are 60 to 70% of male earnings, depending on the estimate (Oschepkov 2006). Some traditionally female white-collar occupations are quite poorly paid.

Research questions and hypotheses

Following the logic and guidelines of the EDUREU project, this paper answers four research questions. First, is there any effect of parental social background (measured as occupational status) on their children's own occupational status and earnings, once we control for children's education? Second, does this effect change over time? Third, is there any difference in the size of the effect across educational levels? Fourth, do returns on education in terms of occupational status and earnings change over time?

Given the brief literature review and the descriptive analysis presented above we are led to the following hypotheses in respect to four research questions posed at the beginning of this section. There is little doubt that intergenerational transmission of social advantage exists in Russia as well as in other countries. Therefore, we may expect a statistically significant effect of parental background on their children's occupational status and earnings even when education is taken into account (question 1). Earlier findings suggest that the origins to destinations link strengthened in the post-Soviet period (Gerber and Hout 2004), so we would expect the effect of parental background to increase over time (question 2). Bernardi (2012) provides theoretical arguments why the effect of parental background may be weaker for those with higher education. First, the labour market for people with higher education may function more meritocratically. Second, students from lower socio-economic background who reached the stage of higher education may be positively selected on ability. Third, people with higher education generally enter the labour market later in life when they are less influenced by parental control. Thus, we may expect the effect of parental background to be lower for people with higher education (question 3). Finally, previous research showed that monetary returns on education increased in Russia (Lukyanova 2010), and this is likely to be confirmed in our data. At the same time, given an increase in the proportion of people with higher education over time and a relatively stable occupational structure, returns on education in terms of occupational status may well decrease (question 4).

Data and methods

While the variables for education and occupation of respondents are available in many surveys conducted in Russia, coding parental occupation is less frequent. To examine the association between parental occupational class/status, children's education and occupational class/status, we collected data from all the surveys where parental occupation was coded. Table 2 shows the list of the data sets and analytical sample sizes. The data sets cover the period from 1990 to 2011, with 7061 observations for 1990-99 and 14,578 observations from 2004 to 2011. The analytical samples include respondents with non-missing information on age, sex, education,

occupation and parental occupation, aged 28 to 65.

Occupational status was operationalized as the International Socio-Economic Index (ISEI) (Ganzeboom, De Graaf and Treiman 1992; Ganzeboom and Treiman 1996). Occupation was coded in all surveys according to ISCO88 and the coding of ISEI is straightforward. Parental ISEI was coded first with the father's occupation; if it was missing, the mother's occupation was used. For education, the surveys applied different classifications, and hence education was recoded into a standardized variable with six levels (see descriptive statistics in Table 3). The educational distribution in the sample is close to the census data (Table 1), although people with higher education are somewhat overrepresented and people with lower levels of education are underrepresented. Post-stratification survey weights were applied³.

The dependent variables in the analysis are ISEI and earnings. ISEI was coded with current occupation, as the information on the first job of respondents was not available in the surveys. Not every survey in the data set had a variable for earnings, and the analytical sample size for the analysis of earnings is smaller ($n=16,752$). I took a logarithm of earnings and standardized logged earnings for each survey with the mean of zero and the standard deviation of one. A very small number of observations with zero earnings were dropped. The independent variables include education, parental ISEI, sex, age, and year of the survey (or period).

As the data are a collection of different surveys, I essentially conduct a meta-analysis. To account for the differences in estimated coefficients between surveys and across time, I used multilevel models with random intercepts and random slopes for parental ISEI. In further analysis, to estimate the effect of parental background across the distribution of earnings I applied quantile regression (Hao and Naiman 2007).

Results

The first step in the analysis was to calculate bivariate correlation coefficients between respondents' and parental ISEI, parental ISEI and respondents' education, and respondents' education and ISEI, separately for each survey in the data set (presented in Table 4). As expected, parental and one's own ISEI are correlated, with $r=0.28$. The coefficient varies from 0.22 to 0.36 across the surveys; however, there is no visible time trend and later surveys do not show a stronger association between parental and respondents' own ISEI. The Spearman's rank correlation coefficient between education and ISEI is 0.56, and between parental ISEI and respondents' education 0.32. In both cases, we do not observe a visible time trend in the strength

³ The Comparative Project in Class Analysis survey did not provide weight coefficients and all the observations were given weight one. Due to the panel design in the RLMS some observations had the cross-sectional weight of zero. Instead of dropping more than 2000 observations, I coded them with the weight of one.

of the coefficients.

Next, I calculate a partial correlation coefficient between respondents' and parental ISEI, controlling for education. The average correlation coefficient is 0.13, ranging from 0.04 to 0.18 across the surveys. This confirms that even when the level of education is taken into account, positive association between parental and respondents' occupational status remains.

To test these findings more rigorously and control for potential confounders, I apply the multilevel regression framework. The results for models with ISEI as the dependent variable are reported in Table 5. Model 1.1 estimates the effect of parental ISEI after controlling for the potentially non-linear effect of age. The regression coefficient for parental ISEI is 0.31, which is close to the correlation coefficient of 0.28 reported in Table 4 (as it should be given that the variances of parental and respondents' ISEI are about the same). Interestingly, age does not have much effect on ISEI. Model 1.2 adds education, and the regression coefficient for parental ISEI drops to 0.11, but remains statistically significant. Model 1.3 adds sex and the interaction effect between sex and parental ISEI. As expected, average ISEI for men is lower than for women, and the effect of parental ISEI is somewhat weaker for men than for women (by 0.03).

Model 1.4 tests the hypothesis that the effect of parental ISEI varies across the levels of education. I do not find much support for this, apart from the lowest level of education (secondary incomplete or less) where the effect of parental background seems to be stronger than for other educational levels. Model 1.5 introduces the effect of time and the interaction between time and parental ISEI (modelling time effects as linear). The main effect for year shows that in later surveys the average ISEI becomes lower (this is consistent with the findings about increased downward intragenerational occupational mobility in post-Soviet Russia). However, the interaction term is not statistically significant suggesting that there is no linear time trend in the strength of the association between parental and own ISEI. To account for possible non-linearity in the effect of time, I estimated a model with a variable for period (with three levels: 1991-93, 1998-99 and 2004-11) instead of the linear time trend and still did not find statistically significant effects (results not shown here).

Finally, model 1.6 looks at the interaction between year and education testing if occupational returns on education changed over time (assuming a linear trend). Compared to general secondary education, returns on lower levels of education (secondary incomplete and lower vocational) increased and returns on higher levels of education (secondary specialized and higher) decreased. This suggests the decreasing importance of education as a determinant of occupational status. Decreasing occupational returns on higher education are consistent with the increase of the share of people with higher education and a relatively stable size of salariat (so

that the competition for a position in the salariat among people with higher education intensified). The analysis with the variable for period instead of year shows that occupational returns on higher education decreased in the 2000s compared to the 1990s, while there is not much difference in this respect between 1991-93 and 1998-99.

The standard deviation for the random slope for the effects of parental ISEI is not very large (about 0.03). This is consistent with relatively stable correlation coefficients for own and parental ISEI in Table 4. The unexplained residual variance drops after including education in the model and does not change much after adding sex, year, and the interaction effects.

Table 6 presents the results of a similar analysis for standardized logged earnings. For the convenience of interpretation, standardized logged earnings were multiplied by 100. As model 2.1 shows, there is a direct effect of parental occupational background on earnings, and a 40-point change in parental ISEI (about the difference between a university professor and a transport conductor) is associated with a 0.36 standard deviation change in logged earnings. Once we control for education (model 2.2), the effect becomes smaller (roughly, a two-point difference in parental ISEI corresponds to a 0.01 standard deviation difference in earnings), but remains statistically significant. Further controlling for sex and adding an interaction effect between sex and parental ISEI shows that the effect of parental ISEI is somewhat larger for men, although the difference between men and women in the effect size is not statistically significant.

Model 2.4 looks at the differences in the effect of parental ISEI on logged earnings by the level of education and shows that for respondents with an incomplete higher education the effect of parental ISEI is small and not statistically significant. There is not much difference in the effect size between people with other levels of education. More specifically, the effect is not weaker for people with higher education. Model 2.5 tests for a linear time trend in the effect of parental occupational status and does not find any. Using a categorical variable for period instead of the linear time trend fails to discover any statistically significant effects either.

Model 2.6 checks if monetary returns on education changed over time and finds that returns on higher education increased (compared to general secondary) but, on the other hand, the difference in earnings between people with secondary general and secondary incomplete education decreased. In other words, returns on secondary general education compared to higher decreased and the difference between secondary general and secondary incomplete became smaller. The analysis with the variable for period showed that the returns on higher education increased in 1998-99 compared to 1991-93 and did not change much between 1998-99 and 2004-11. This confirms Lukyanova's findings (2010).

Finally, I applied quantile regression to the RLMS data to test if the effect of parental background differs across the distribution of earnings (Table 7). In this case, I did not take the logarithm of earnings. The analysis shows that the variance of earnings is larger for people with higher parental occupational status (and also for men and people with higher education). We see indeed that the effect of parental background is stronger at higher earnings percentiles. At the 10th percentile, a 40-point difference in parental ISEI corresponds to the difference in monthly earnings of 388 rubles (about 11 euro, applying the official exchange rate of 30 December 2006), after controlling for education, sex and age. At the median, this difference increases to 1,100 rubles (about 32 euro) and at the 90th percentile to 2,056 rubles (about 59 euro). This is not a trivial effect size, given that median monthly earnings and the interquartile range in our sample equal 6000 rubles.

Discussion

As expected, there is a statistically significant effect of parental occupational status on respondents' occupational status and earnings, even after controlling for the level of education. The average effect of parental ISEI on respondents' ISEI after controlling for education in Russia is 0.11 (0.12 for women and 0.09 for men). This is close to the estimates reported for other European countries in the EDUREU project. The intergeneration heredity of occupational positions seems to be about as strong in Russia as in other European countries, despite very different historical trajectories and institutional legacies.

Considering the second research question, there was no time trend in the strength of the association between respondents' and their parents' occupational status, as well as between parental occupational status and respondents' earnings (controlling for education, age and sex). This contradicts earlier findings about decreased social fluidity in post-Soviet Russia, reported by Gerber and Hout (2004). The present analysis was based on a much larger data set compared to Gerber and Hout's study and included five out of six surveys that they used (data from the sixth survey were not available). If we look at the surveys used by Gerber and Hout that are also present in the data set, the coefficients of correlation between parental and respondents' ISEI in the surveys conducted in 1990-92 are indeed somewhat lower than in 1993, 1998 and 1999 (see Table 4). However, if more recent data are taken into account, there is not enough evidence that the association between social origins and destinations strengthened in the late 1990s and 2000s compared to the early 1990s. The difference in the correlation coefficients between the first two surveys in the data set and other surveys is also rather weak and is likely to be spurious.

In their analysis, Gerber and Hout applied log-multiplicative models for contingency tables of parental and respondents' social class, while my findings are based on simple correlation and

regression models, in which occupational status was operationalized as ISEI. Studies based on statistical methods for categorical and interval data may in principle give contradictory results. The question on whether social fluidity did indeed decrease in Russia in the post-Soviet period remains open until Gerber and Hout's study is replicated with our larger data set using statistical methods for contingency tables standard in modern social mobility research.

There were no significant differences in the effect of parental background across educational levels. It has been argued before that the effect for people with higher education may be weaker, as the labour market for non-manual occupations is more meritocratic. Also, among people with lower socio-economic background there may be positive selection to higher education on ability (Bernardi 2012). The Russian data do not provide confirmation for this hypothesis.

Bernardi (2012) discussed several mechanisms that may be responsible for the intergenerational transmission of social advantage outside the educational system. These are differential selection of the field of study, unobserved cognitive and non-cognitive skills (correlated with both parental background and their children's occupation and earnings), and the differences in job matching mechanisms among graduates with different socio-economic background. In the data set I do not have the information required to test any of these mechanisms and have to restrict myself to the description of basic facts about the effects of parental background rather than explain the mechanisms involved.

However, one mechanism deserves a separate discussion in the Russian case. A large body of literature deals with the role of informal mechanisms in the process of job search in Russia. While using social networks for a job search is common in many countries (Granovetter 1973), it was argued that for Russia networking is particularly important (Ledeneva 1998). Gerber and Mayorova (2006) convincingly demonstrated an increase in the frequency of obtaining a job through personal contacts relative to other channels in the 1990s. Yakubovich and Kozina (2000) also documented the importance of personal connections in the hiring process and attributed it to the diminished role of educational credentials.

So far a quantitative study of the relative importance of informal channels in the job search and hiring process in Russia compared to other countries has not been conducted. If social networks have particular importance in post-Soviet Russia we may expect the effect of parental background (after controlling for education) to be stronger there than in other countries and increase over time. It is likely that access to social networks providing good jobs varies in families with different social backgrounds and higher parental occupational status may give access to better networks. However, in Russia as the effect of parental background after controlling for education is stable over time and is not particularly large compared to other

countries in the EDUREU project (at least in regard to ISEI). This contradicts the hypothesis about the special importance of networking in the process of job search in Russia.

Finally, I looked at the change in returns on education in Russia over time. Previous research showed that monetary returns on education in Russia increased in the 1990s and stabilized in the 2000s (Lukyanova 2010). The analysis in this paper confirms this finding. Less attention has been paid to returns on education in terms of occupational status. As the Russian occupational structure remained relatively stable in the 1990s and 2000s and at the same time the proportion of people with higher education increased, we expected occupational returns on higher education to decrease over time. This is indeed what we see in the data. In the 2000s, compared to the 1990s, the competition for jobs with higher occupational status among people with higher education intensified. If the educational expansion continues in Russia and the economy and the corresponding occupational structure do not modernize correspondingly, this may lead to a decrease in monetary returns on higher education in the near future.

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Tables

Table 1. Distributions by education and occupational class, 1989-2010

Education	Men, aged 30 to 64 (%)			Women, aged 30 to 64 (%)		
	1989	2002	2010	1989	2002	2010
Secondary incomplete or less	32	11	10	36	11	7
Lower vocational (<i>PTU, FZU, uchilische</i>)	19	19	8	9	12	5
Secondary general	16	18	21	16	16	17
Secondary specialized (<i>tekhnikum</i>)	17	30	35	24	38	40
Higher incomplete	1	2	2	1	2	2
Higher	15	20	24	14	21	29
Occupational class (ESEC)	1994	2002	2010	1994	2002	2010
1. Higher managers/professionals	11	11	11	16	15	15
2. Lower managers/professionals	7	8	8	22	22	23
3. Intermediate occupations	3	3	5	11	14	14
4/5. Self-employed	5	5	3	2	4	3
6. Lower supervisors/technicians	1	2	1	2	2	2
7. Lower sales and services	3	3	6	16	15	20
8. Lower technical	31	27	25	7	5	4
9. Routine	39	41	41	24	23	19
Ratio: higher education / classes 1 and 2	0.8	1.1	1.3	0.4	0.6	0.8

Sources: Russian census (education); Russia Longitudinal Monitoring Survey (RLMS-HSE). ESEC was coded with the simplified syntax based on occupation only.

Table 2. Data sets used for the analysis

Survey	Year	Analytical sample size
Comparative Project in Class Analysis: United States and Russia	1991-92	1413
International Social Survey Programme: Social Inequality II	1992	761
Social Stratification in Eastern Europe After 1989: General Population Survey	1993	2557
Survey of Employment, Income and Attitudes in Russia (SEIAR)	1998	1925
International Social Survey Programme: Social Inequality III	1999	405
Generations and Gender Survey	2004	4723
Russia Longitudinal Monitoring Survey – Higher School of Economics	2006-07	4329
European Social Survey Round 3	2006-07	1257
European Values Study	2008	760
European Social Survey Round 4	2008-09	1269
International Social Survey Programme: Social Inequality IV	2009	825
European Social Survey Round 5	2010-11	1415
Total		21639

Note: The analytical samples include all respondents with non-missing information on age, sex, own occupation and education and parental occupation, aged 28 to 65.

Table 3. Descriptive statistics for the analytical sample

Variable	Percentage or mean
Sex	
Men	45%
Women	55%
Age	44.2
Education	
Secondary incomplete or less	9%
Lower vocational (<i>PTU, FZU, uchilsche</i>)	14%
Secondary general	20%
Secondary specialized (<i>tekhnikum</i>)	26%
Higher incomplete	2%
Higher	30%
EGP class	
I. Higher managers/professionals	16%
II. Lower managers/professionals	20%
III. Routine non-manual	15%
IV. Self-employed	3%
V. Manual supervisors and technicians	3%
VI. Skilled manual workers	19%
VIIa. Semi- and unskilled manual labour	20%
VIIb. Agricultural workers	4%
Parental EGP class	
I. Higher managers/professionals	11%
II. Lower managers/professionals	10%
III. Routine non-manual	7%
VI. Skilled manual workers	31%
VIIa. Semi- and unskilled manual labour	21%
VIIb. Agricultural workers	20%
ISEI	43.5
Parental ISEI	37.6

Note: Survey weights were applied.

Table 4. Correlation coefficients for parental ISEI, own ISEI and education

Data set	Own and parental ISEI (Pearson)	Own education and ISEI (Spearman)	Own education and parental ISEI (Spearman)	Partial: own and parental ISEI, controlling for own education (Pearson)
CPCA 1990-92	0.28	0.71	0.37	0.06
ISSP 1992	0.25	0.56	0.31	0.07
SSEE 1993	0.31	0.58	0.32	0.14
SEIAR 1998	0.30	0.61	0.35	0.12
ISSP 1999	0.31	0.59	0.32	0.13
GGG 2004	0.22	0.51	0.25	0.11
RLMS-HSE 2006-07	0.29	0.58	0.33	0.11
ESS 2006-07	0.36	0.60	0.37	0.14
EVS 2008	0.34	0.59	0.33	0.18
ESS 2008-09	0.24	0.59	0.35	0.04
ISSP 2009	0.30	0.52	0.28	0.16
ESS 2010-11	0.28	0.57	0.24	0.15
All	0.28	0.56	0.32	0.13

Table 5. Regression models for own ISEI

Variable	Model 1.1	Model 1.2	Model 1.3	Model 1.4	Model 1.5	Model 1.6
<i>Fixed effects:</i>						
Intercept	30.0*** (12.6)	34.5*** (16.9)	37.3*** (18.2)	37.8*** (18.0)	40.6*** (18.6)	40.0*** (18.6)
Parental ISEI	0.31*** (22.3)	0.11*** (10.1)	0.12*** (10.3)	0.11*** (6.2)	0.11*** (5.0)	0.11*** (10.0)
Age	0.14 (1.4)	-0.05 (-0.6)	-0.11 (-1.2)	-0.11 (-1.3)	-0.11 (-1.3)	-0.08 (-1.0)
Age ² /100	-0.19* (-1.7)	0.04 (0.4)	0.09 (1.0)	0.1 (1.0)	0.1 (1.0)	0.07 (0.7)
Education (ref.: secondary general)						
Secondary incomplete or less		-5.8*** (-15.3)	-5.8*** (-15.3)	-7.8*** (-7.8)	-5.9*** (-15.4)	-7.5*** (-10.9)
Lower vocational (<i>PTU, FZU, uchilische</i>)		-2.6*** (-7.8)	-2.3*** (-7)	-2.2*** (-2.6)	-2.3*** (-7.0)	-3.9*** (-5.7)
Secondary specialized (<i>tekhnikum</i>)		6.2*** (21.9)	5.6*** (20.2)	6.3*** (8.5)	5.6*** (20.2)	7.3*** (11.4)
Higher incomplete		8.6*** (11.3)	8.6*** (11.6)	10.0*** (5.0)	8.6*** (11.5)	9.5*** (6.1)
Higher		21.1*** (75.9)	20.6*** (74.6)	20.4*** (28.5)	20.6*** (74.6)	22.0*** (33.7)
Sex: male			-2.9*** (-6.3)	-3.9*** (-20.9)	-3.9*** (-20.9)	-3.9*** (-21.1)
Year (1991=0)					-0.26*** (-3.1)	-0.25*** (-3.2)
Parental ISEI * Male			-0.03** (-2.3)			
Parental ISEI * Secondary incomplete or less				0.06** (2.1)		
Parental ISEI * Lower vocational				-0.003 (-0.1)		
Parental ISEI * Secondary specialized				-0.02 (-1)		
Parental ISEI * Higher incomplete				-0.03 (-0.7)		
Parental ISEI * Higher				0.006 (0.3)		
Parental ISEI * Year					0.0003 (0.2)	
Year * Secondary incomplete or less						0.21*** (3.5)
Year * Lower vocational						0.15*** (2.8)
Year * Secondary specialized						-0.13*** (-2.8)
Year * Higher incomplete						-0.07 (-0.6)

Year * Higher						-0.11** (-2.3)
<i>Random effects:</i>						
Random intercept	4.7 (2.2)	5.5 (2.3)	5.7 (2.4)	5.9 (2.4)	2.9 (1.7)	2.7 (1.7)
Random slope for parental ISEI	0.001 (0.04)	0.0007 (0.03)	0.0008 (0.03)	0.0008 (0.03)	0.001 (0.03)	0.0009 (0.03)
Residual variance (standard deviation)	263.6 (16.2)	183.2 (13.5)	179.6 (13.4)	179.6 (13.4)	179.6 (13.4)	179.1 (13.4)
n	21639	21639	21639	21639	21639	21639

Note: The dependent variable is own ISEI. t-statistics in parentheses. For random effects variance reported, standard deviations in parentheses. Survey weights applied. * p<0.1 ** p<0.05 *** p<0.01

Table 6. Regression models for standardized logged earnings

Variable	Model 2.1	Model 2.2	Model 2.3	Model 2.4	Model 2.5	Model 2.6
<i>Fixed effects:</i>						
Intercept	-163.7*** (-10.3)	-138.2*** (-8.8)	-183.9*** (-12.1)	-188.3*** (-12.1)	-183.1*** (-11.4)	-181.6*** (-11.8)
Parental ISEI	0.89*** (11.7)	0.52*** (6.8)	0.43*** (4.7)	0.54*** (3.9)	0.44*** (2.9)	0.48*** (6.0)
Age	6.6*** (9.4)	5.6*** (8.1)	6.2*** (9.4)	6.2*** (9.5)	6.2*** (9.5)	3.3*** (5.1)
Age ² /100	-7.9*** (-10.4)	-6.6*** (-8.8)	-7.1*** (-10.0)	-7.2*** (-10.0)	-7.2*** (-10.0)	-4.4*** (-6.1)
Education (ref.: secondary general)						
Secondary incomplete or less		-26.0*** (-9.0)	-25.2*** (-9.2)	-27.2*** (-3.8)	-25.2*** (-9.2)	-39.2*** (-7.9)
Lower vocational (<i>PTU, FZU, uchilische</i>)		0.7 (0.2)	-3.2 (-1.2)	-13.3* (-1.9)	-3.3 (-1.2)	-1.1 (-0.2)
Secondary specialized (<i>tekhnikum</i>)		3.2 (1.4)	11.8*** (5.3)	17.4*** (2.9)	11.8*** (5.3)	5.4 (1.2)
Higher incomplete		24.0*** (3.9)	21.3*** (3.6)	52.4*** (3.3)	21.4*** (3.6)	14.2 (1.3)
Higher		34.9*** (15.6)	44.2*** (20.7)	49.0*** (8.9)	44.2*** (20.7)	32.4*** (6.9)
Sex: male			58.4*** (16.2)	62.0*** (41.9)	62.1*** (42.0)	62.3*** (48.1)
Year (1991=0)					-0.35 (-0.5)	-0.71* (-1.8)
Parental ISEI * Male			0.1 (1.1)			
Parental ISEI * Secondary incomplete or less				0.07 (0.3)		
Parental ISEI * Lower vocational				0.31 (1.6)		
Parental ISEI * Secondary specialized				-0.16 (-1.0)		
Parental ISEI * Higher incomplete				-0.74** (-2.1)		
Parental ISEI * Higher				-0.13 (-0.9)		
Parental ISEI * Year					0.005 (0.4)	
Year * Secondary incomplete or less						1.66*** (3.4)
Year * Lower vocational						-0.39 (-0.9)
Year * Secondary specialized						0.61 (1.5)
Year * Higher incomplete						0.64 (0.7)
Year * Higher						1.13***

						(2.8)
<i>Random effects:</i>						
Random intercept	68.8 (8.3)	37.5 (6.1)	73.7 (8.6)	79.1 (8.9)	89.1 (9.4)	54.7 (7.4)
Random slope for parental ISEI	0.02 (0.14)	0.02 (0.14)	0.03 (0.17)	0.03 (0.17)	0.04 (0.20)	0.03 (0.16)
Residual variance (standard deviation)	9777 (98.9)	9458 (97.3)	8546 (92.4)	8542 (92.4)	8546 (92.4)	8536 (92.4)
n	16752	16752	16752	16752	16752	16752

Note: The dependent variable is logged monthly earnings, standardized for each survey (with the mean of zero and the standard deviation of one) and multiplied by 100. A small number of observations with zero earnings were dropped. t-statistics in parentheses. For random effects variances reported, standard deviations in parentheses. Survey weights applied. * p<0.1 ** p<0.05 *** p<0.01

Table 7. Quantile regression models for earnings

Variable	tau=0.1	tau=0.3	tau=0.5	tau=0.7	tau=0.9
Intercept	317 (0.2)	1039 (0.9)	1980 (1.1)	1841 (0.7)	-1054 (-0.2)
Parental ISEI	9.7*** (2.8)	15.7*** (4.3)	27.5*** (5.4)	27.7*** (4.1)	51.4*** (2.6)
Age	65.6 (1.1)	75.8 (1.4)	81.7 (1.0)	192.7 (1.6)	526.6* (1.9)
Age ² /100	-94.0 (-1.4)	-106.2 (-1.6)	-127.8 (-1.4)	-278.9** (-2.1)	-721.5** (-2.3)
Education (ref.: secondary general)					
Secondary incomplete or less	-397** (-2.6)	-644*** (-3.7)	-560 (-1.4)	-523 (-1.2)	-1133 (-0.9)
Lower vocational (<i>PTU, FZU, uchilsche</i>)	110 (0.8)	7 (0.05)	-67 (-0.2)	-196 (-0.6)	-38 (-0.05)
Secondary specialized (<i>tekhnikum</i>)	561*** (4.0)	781*** (6.1)	818*** (3.0)	1004*** (3.2)	1659** (2.1)
Higher incomplete	1032*** (4.6)	1355*** (6.0)	1104** (2.5)	1345** (2.0)	2957 (1.65)
Higher	1781*** (9.8)	2318*** (13.2)	2972*** (9.6)	4116*** (11.1)	7624*** (5.9)
Sex: male	1122*** (10.5)	2255*** (18.6)	3323*** (18.8)	4474*** (18.2)	6649*** (10.8)
n	3872				

Data: RLMS-HSE 2006. The dependent variable is monthly earnings in rubles. t-statistics in parentheses. * p<0.1 ** p<0.05 *** p<0.01

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