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## SOCIAL ORIGINS AND EDUCATIONAL INEQUALITY IN UKRAINE

*The article deals with the educational inequality among children of different social backgrounds which has never been studied in Ukraine neither during the Soviet period, nor since independence. The results are based on representative survey data restricted to Ukrainian citizens born 1930 and later – up to 1980. To capture educational inequality change over time, we compare results for three quasi-birth cohorts, two Soviet cohorts and one post-Soviet. Our results show that obtaining of higher tertiary education in Ukraine is strongly socially dependent and unequal, given the fact of largely accessible and later compulsory full secondary education. Social background in terms of fathers' and mothers' education and class proved to be the permanent factor of educational inequality in all three cohorts.*

The development of inequality in educational attainment in the second half of the 20<sup>th</sup> century is well documented both in the European advanced and in some post-socialist countries [1; 2; 3; 4; 5; 6]. Much is known about the change or persistence of inequalities of educational opportunities in different European countries, but not in Ukraine. In contrast to advanced European and post-socialist countries, educational inequality among children of different social backgrounds has never been studied in Ukraine – neither during the Soviet period, nor since independence. No representative studies are available that identify the main trends

in educational inequality, nor do any comparisons with other countries exist. Therefore, the presented analysis can be regarded as an early study of social and class differences in educational participation and educational attainment within Soviet and post-Soviet cohorts of Ukrainians.

At the outset, we assume that some features intrinsic to Soviet educational inequality still persist in Ukraine, but some have changed. Socially derived opportunities for obtaining tertiary education are of particular interest. As in other societies, participation in higher education in Ukraine has considerably grown over the last few decades: in

1990 the country boasted 149 institutes of higher education and approximately 881 000 students; 17 years later about 2 319 000 students are enrolled in tertiary education programs at 350 institutes and universities. Tertiary educational expansion was accompanied by a population decline and a decline in birth rates. Logically, the share of the population that has obtained the highest educational level increased with the largest increases coming from the youngest post-Soviet generation. But does this dramatic educational expansion mean the extension of educational opportunities for all social classes? Does an increase in numbers of men and women attending higher education institutions lead to a decline in inequality in tertiary education or to an increase in inequality?

Full general secondary schooling was introduced as compulsory in Ukraine during the 1970's when the country was still a Soviet republic. Since then, Ukrainians have 10 (now 11) years of free compulsory education for those aged 7 (now 6) and over. But there exists some uncertainty as to whether the youngest post-Soviet cohort is equally educated (in terms of having completed full secondary education) as the previous Soviet cohort. During the last decade the child labor rate in Ukraine has increased. Despite legislation that requires all children to attend compulsory secondary schooling, quite a few young men and women have no intention or opportunity to continue schooling at the upper secondary level. This is especially true for rural areas. Since the end of the World War II, Ukraine has never had as many homeless children and teenagers of school age, as it has now.

#### **Data, variables and methods**

Our results are based on representative survey data collected by the Kiev International Institute of Sociology in 2003–2004. We restrict our data to Ukrainian citizens born 1930 and later – up to 1980. The data set comprises 7,205 observations. To capture educational inequality change over time, we compare results for three quasi-birth cohorts, two Soviet cohorts and one post-Soviet. The earlier cohort consists of men and women born in 1930–1949. The last cohort consists of men and women born in 1950–1972. During the period of schooling of all cohorts, completion of general secondary education was compulsory.

The youngest cohort is named post-Soviet and consists of men and women born in 1973–1980. For this cohort the time of obtaining upper secondary and tertiary educational levels coincided with the period of the disintegration of the Soviet Union, and the first years of Ukrainian independence. The

youngest cohort respondents are at least 22–23 years old – in order to allow at least some of them to obtain a higher educational degree.

Besides cohort and gender we use other variables in our analysis.

The highest level of educational attainment is measured using the CASMIN educational classification. We use four educational categories for respondents and respondent's father and mother:

1. Less than full secondary education (completed elementary education, elementary education and basic vocational qualification, secondary, intermediate general qualification, secondary, intermediate vocational qualification);

2. (Compulsory) Full secondary education (full general secondary education or general secondary education and vocational qualification);

3. Lower tertiary education (e. g. technical college diplomas, non-university teaching certificates);

4. Higher tertiary education.

Class origins are categorised using the EGP class schema. For Ukraine we identify 8 classes:

I. Upper service (higher grade professionals etc.).

II. Lower service (lower grade professionals etc.).

IIIab. Routine non-manual, higher grade and lower grade.

IVabc. Small proprietors and Farmers.

V. Lower grade technicians.

VI. Skilled manual workers.

VIIa. Semi- and unskilled manual workers.

VIIb. Semi- and unskilled manual agricultural workers.

We allocate VIIb class of manual agricultural workers as separate because of the relatively large proportion of Ukraine's population that is rural. Today it still consists of almost 30 %.

As independent variables, we use two measures of social origin: parents' education, parents' social class and respondent's settlement background – urban or rural place, where he / she was born.

#### **Changes in educational attainment and social origins**

Table 1 provides information on the cohort proportions of men and women according to four education-level categories. The data clearly indicate that about 35% of men and women did not reach full secondary level of education in the earlier cohort. In the last Soviet cohort the share of the poorly educated men decreased to 15% and the appropriate share of women decreased more dramatically to 9%. However, in the youngest post-Soviet

cohort we observe the opposite trend: about 22% of young men and 14% of young women did not graduate with a completed secondary education certificate (contrary to the law on compulsory full general secondary education). In last Soviet cohort and

in post-Soviet cohort the proportion of women who obtained lower tertiary or higher tertiary education is greater than that of men. We can thus see a non-traditional gender gap.

We assume that mother's education as well as

**Table 1. Percentages for educational credential by cohorts; for men and women, 22 years or older and born in 1930 or later**

Cohorts	Less than full secondary		Full secondary		Lower tertiary		Higher tertiary	
	Men	Women	Men	Women	Men	Women	Men	Women
1930–1949	35,0	35,8	32,8	29,9	15,2	20,3	17,0	14,0
1950–1972	15,0	8,9	49,1	41,8	18,3	28,8	17,6	20,5
1973–1980	22,6	14,3	42,2	37,0	14,2	25,7	21,0	23,0

father's education affects educational outcomes of children. Tables 2 and 3 show the percentages of men and women who have attained different educational degrees depending on father's and mother's education. As we can see, social background in terms of parental education clearly affects educational choice and outcomes for sons and daughters. Men and women from less educated backgrounds are more likely to obtain full secondary education or less. Men and women from families with higher educational resources are much more likely to graduate from university. Lower tertiary

education seems to be more available for sons and daughters of all social backgrounds except for those of uneducated parents.

Parents' class affects educational outcomes in basically similar ways. Tables 4 and 5 show the percentages of men and women who have attained different educational degrees depending on social class of origin (father's and mother's class separately). The numbers reveal a very clear pattern. Children from the upper service class achieve a university degree much more often than working class children. From 55% to 66% of the upper

**Table 2. Percentages of achieved educational credentials according to father's education; for all individuals, age 22 or older and born in 1930 or later**

Father's education	Respondent's education			
	Less than full secondary	Full secondary	Lower tertiary	Higher tertiary
Less than full secondary	27	43	20	10
Full secondary	13	41	24	22
Lower tertiary	9	29	29	33
Higher tertiary	5	20	18	57

**Table 3. Percentages of educational credentials according to mother's education; for men and women, age 22 or older and born in 1930 or later**

Mother's education	Respondent's education			
	Less than full secondary	Full secondary	Lower tertiary	Higher tertiary
Less than full secondary	27	43	20	10
Full secondary	12	43	24	21
Lower tertiary	8	29	28	35
Higher tertiary	7	18	17	58

**Table 4. Percentages for educational credentials by Father's class; for men and women, age 22 or older and born in 1930 or later**

Father's class	Respondent's education							
	Less than full secondary		Full secondary		Lower tertiary		Higher tertiary	
	Men	Women	Men	Women	Men	Women	Men	Women
I	2,2	3,0	16,3	20,2	15,8	22,2	65,8	54,5
II	13,1	9,9	29,2	21,6	22,3	25,3	35,4	43,2
III	19,0	9,3	33,3	28,7	23,8	25,9	23,8	36,1
IV	13,9	15,2	33,3	32,6	16,7	26,1	36,1	26,1
V	16,0	8,3	35,1	36,8	20,6	25,7	28,2	29,2
VI	20,8	13,9	45,9	38,5	20,3	31,8	13,0	15,8
VII	23,7	16,8	48,5	39,8	17,0	27,4	10,8	16,0
VIIb	26,7	27,4	50,2	41,8	14,8	22,2	8,3	8,7

**Table 5. Percentages for educational credentials by Mother's class; for men and women, age 22 or older and born in 1930 or later**

Mother's class	Respondent's education							
	Less than full secondary		Full secondary		Lower tertiary		Higher tertiary	
	Men	Women	Men	Women	Men	Women	Men	Women
I	5,8	2,6	20,9	14,1	11,6	23,1	61,6	60,3
II	10,3	4,4	25,4	17,9	19,7	28,6	44,6	49,2
III	13,7	7,7	45,3	28,4	22,6	33,3	18,3	30,6
IV	12,5	19,0	62,5	38,1	0,0	19,0	25,0	23,8
V	9,4	9,6	28,1	36,5	34,4	32,7	28,1	21,2
VI	19,0	9,8	48,5	43,4	23,3	30,2	9,2	16,6
VII	20,7	14,6	50,5	45,1	18,1	26,5	10,8	13,8
VIIb	29,5	29,4	47,5	40,8	13,8	22,5	9,2	7,2

service class offspring attain the highest educational level. Children of semi- and unskilled manual agricultural workers seem to be the most disadvantaged in terms of obtaining higher tertiary education. On the other hand, lower tertiary education seems to be available for sons and daughters of all social classes at approximately the same level.

For testing the relationship between the educational chances for youth and their parents' levels of education and social class positions we used logistic regression analysis of the chances of attaining a corresponding level of education.

Firstly we present logistic regressions the odds of attaining a higher tertiary degree separately for each of the three age cohorts – two from the Soviet

period and the third from the Post-Soviet Ukrainian period. We use a dummy variable of higher tertiary degree vs. no higher tertiary degree as dependent variable. As independent variables, we use four measures of a social origin. Two measures of respondents' social origin are measures of their parents' educational levels. The other two measures of respondents' social origin are measures of their parents' class positions. Unfortunately, some respondents have no information on their father's and / or mother's employment and / or level of education, and these data are missing in available the database for Ukraine. To keep such cases in the analysis we include corresponding categorical variables of unknown parents' education and class positions.

Because educational inequalities in Ukraine are related to gender and settlement background we statistically control gender and urban-rural background, using their categorical measures as independent variables.

We tested different interaction effects of father's and mother's class position, and father's and mother's education level. None turned out to be statistically significant, so these interaction effects were dropped.

For all three cohorts the logit effects indicate distinct differences in the odds of receiving higher tertiary education subject to both parents' education and father's class positions. In all three cohorts, the chances of obtaining higher tertiary education were much higher for children whose fathers or mothers had higher tertiary education. However, after the collapse of the USSR, inequality of educational opportunity for children whose fathers or mothers had no higher tertiary education increased in comparison to the Soviet period (Figure 1).

At the same time, during the fifty years that we are reviewing, the range of dependence of chances to receive higher tertiary education on father's class position decreased noticeably. Thus, during the first Soviet period the odds of obtaining higher tertiary education for children of fathers from the upper service class (class I) were considerably and statistically significant higher, than for children of fathers from almost all other classes (see Table 6). But in the last Soviet period, such inequality of chances was not revealed for children of fathers

from five classes, namely – from lower service class (class II), from routine non-manuals (class III), from small proprietors or farmers (class IV), from working class elite (class V) and from agricultural workers (class VIII). Furthermore, in the first post-Soviet period, much lower chances of attending higher education institutions (with high statistical significance) were found for children of fathers from one class only – that of agricultural workers (class VIII).

No dependence between the chances of obtaining higher tertiary education and the class position of one's mother during the earlier Soviet period was found at all. However, in last Soviet period, an unequal dependence between educational chances and the class position of one's mothers was revealed only for two classes: surprisingly, not for skilled workers (class VI) and unskilled workers (class VII) (as was the case when examining dependency between education and father's class position), but from unskilled workers (class VII) and agricultural workers (class VIII). Furthermore, in the post-Soviet period dependence of chances to obtain higher tertiary education on class position of one's mother appeared to be significant for children of mothers from one class only, just as for fathers – from agricultural workers (class VIII).

For both older cohorts which represent the Soviet period in Ukraine, the logit effects indicate noticeable but opposite gender differences in the chances of one's receiving tertiary education: during the earlier Soviet period, the chances of women obtaining tertiary education were below the chances

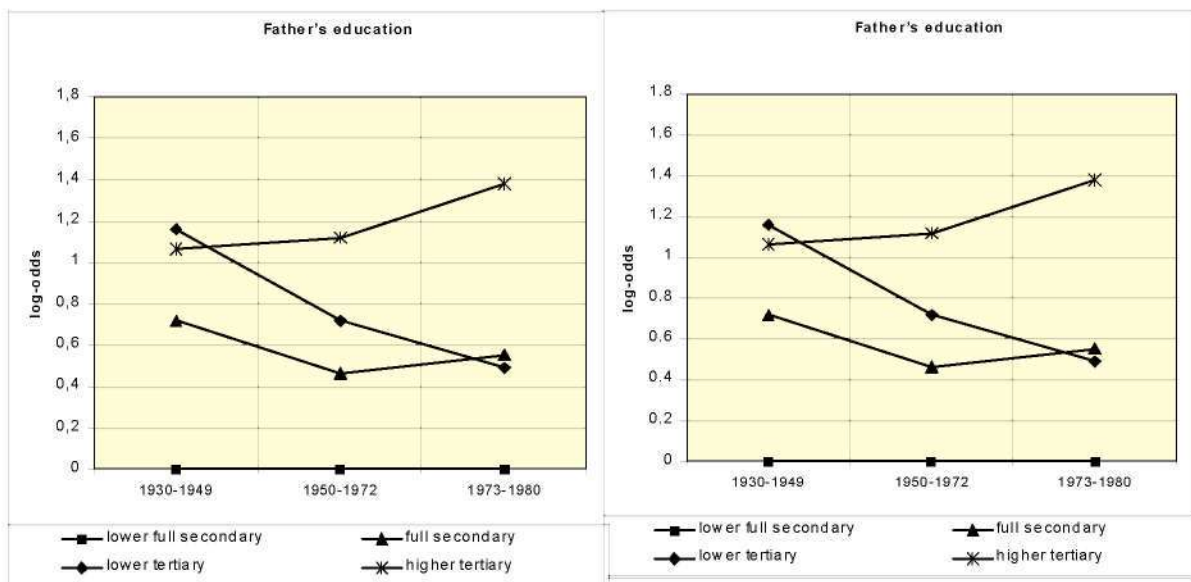


Figure 1. Logit effect of parents' education on higher tertiary education: in Ukraine, age 22 and older and born in 1930 or later

Table 6. Logistic regression of higher tertiary education (vs. no higher tertiary education) on gender, urban-rural background, parents' education and social classes; in Ukraine, age 22 and older and born in 1930 or later (Main effects)

	1930–1949		1950–1972		1973–1980	
	<i>B</i>	Sig.	<i>B</i>	Sig.	<i>B</i>	Sig.
<b>Gender</b>						
<i>Men</i>						
Women	<b>-0,29</b>	0,03	<b>0,27</b>	0,01	0,27	0,10
<b>Settlement background</b>						
<i>Urban background</i>						
Rural background	<b>-0,46</b>	0,00	-0,22	0,06	-0,03	0,87
<b>Father's education</b>		0,00		0,00		0,00
<i>lower full secondary education</i>						
full secondary education	<b>0,72</b>	0,01	<b>0,46</b>	0,00	<b>0,55</b>	0,05
lower tertiary	<b>1,16</b>	0,00	<b>0,72</b>	0,00	0,49	0,13
higher tertiary education	<b>1,06</b>	0,00	<b>1,12</b>	0,00	<b>1,38</b>	0,00
unknown	-0,20	0,44	<b>-0,64</b>	0,04	<b>-1,26</b>	0,04
<b>Mother's education</b>		0,00		0,00		0,00
<i>lower full secondary education</i>						
full secondary education	<b>0,76</b>	0,00	0,22	0,15	0,27	0,38
lower tertiary	0,29	0,41	<b>0,72</b>	0,00	<b>0,68</b>	0,04
higher tertiary education	<b>1,62</b>	0,00	<b>0,97</b>	0,00	<b>1,41</b>	0,00
unknown	-0,19	0,61	-0,54	0,28	1,31	0,08
<b>Father's class position</b>		0,01		0,00		0,19
<i>upper service class (I)</i>						
lower service class (II)	<b>-0,86</b>	0,03	-0,07	0,81	-0,44	0,31
routine non-manuals (III)	-0,55	0,22	0,36	0,30	-0,31	0,60
small proprietors, farmers (IV)	-1,21	0,07	-0,18	0,67	0,41	0,70
working class elite (V)	<b>-1,05</b>	0,01	-0,12	0,70	0,02	0,96
skilled workers (VI)	<b>-1,37</b>	0,00	<b>-0,82</b>	0,00	-0,26	0,48
unskilled workers (VII)	<b>-1,53</b>	0,00	<b>-0,67</b>	0,01	-0,33	0,40
agricultural workers (VIII)	<b>-1,27</b>	0,00	-0,51	0,07	<b>-1,74</b>	0,01
unknown	<b>-1,16</b>	0,00	<b>-0,51</b>	0,05	0,21	0,61
<b>Mother's class position</b>		0,24		0,01		0,06
<i>upper service class (I)</i>						
lower service class (II)	0,15	0,84	-0,02	0,95	0,29	0,45
routine non-manuals (III)	0,41	0,59	-0,41	0,20	-0,31	0,46
small proprietors, farmers (IV)	-1,54	0,29	-0,79	0,33	-0,10	0,92
working class elite (V)	-0,33	0,80	-0,34	0,45	-0,77	0,32
skilled workers (VI)	-0,22	0,80	-0,70	0,06	-0,41	0,38
unskilled workers (VII)	-0,26	0,73	<b>-0,73</b>	0,03	-0,57	0,21
agricultural workers (VIII)	-0,46	0,53	<b>-0,90</b>	0,01	<b>-1,90</b>	0,05
unknown	-0,20	0,78	-0,34	0,30	-0,64	0,14
<b>Constant</b>	-0,31	0,69	<b>-1,11</b>	0,00	<b>-1,93</b>	0,00
	N = 2534		N = 3409		N = 1019	

Notes: Names of reference categories are written in *italic*. Statistical significant logistic coefficients at the level  $p < 0,05$  (by Wald statistic) are marked by **bold type**.

of men by more than 25%, whereas in last Soviet period, the chances of women were almost 25% higher than the chances of men. For the post-Soviet cohort dependence of odds of attaining tertiary education on gender is not statistically significant (see Figure 2).

Thus, our analysis has shown that during the period of post-Soviet transformations in Ukraine, the educational levels of parents have much more influence on the reproduction of unequal chances for educational attainment: obtaining higher tertiary

education follows a generational pattern that is more significant than other unequal socially-structural circumstances, including even inequalities of class positions of parents.

We would like to note, that we consider proposed analysis only as a first step to studying of intergenerational educational mobility in Ukraine. All the conclusions concerning by the initial post-Soviet period, can be considered only as preliminary because for the present this period can be presented by respondents at the age of 30 years or less, and

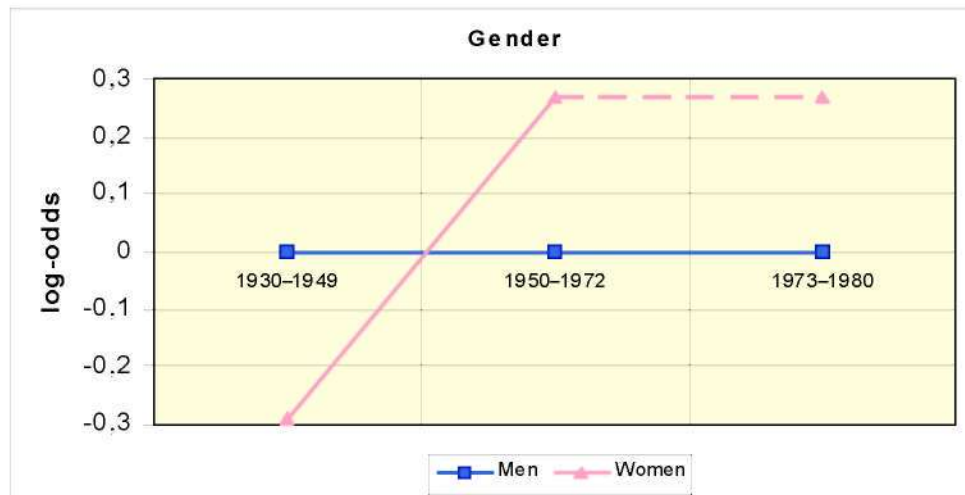


Figure 2. Logit effect of gender on higher tertiary education; in Ukraine, age 22 and older and born in 1930 or later

in available data files youth from 22 till 30 years consists some above only one thousand persons. However, conducted analysis allows to make some conclusions.

### Conclusions

For the historical period to which our data refer it appears well-founded to conclude that obtaining of higher tertiary education in Ukraine is strongly socially dependent and unequal, given the fact of largely accessible and later compulsory full secondary education.

Social background in terms of fathers' and mothers' education proved to be the permanent factor of educational inequality in all three cohorts. In all these cohorts chances to attain higher tertiary education were much better for children whose fathers and / or mothers had attained higher tertiary education. While social background meant less for the attainment of higher education among those born in 1950–1972 as compared to earlier soviet cohort, a similar change is not observed among children born in 1973–1980 (post-soviet cohort). There are evidences that the association between origins and education have begun to strengthen again.

This turned to be true even for the accessibility of the full secondary education, compulsory for the last soviet and post-soviet cohorts.

One of the most revealing findings of the analysis concerns the remaining gender inequalities. The particularity consists in two patterns of inequality. While in earlier soviet cohort we can see traditional gender inequality when men had better chances to obtain higher tertiary education, in the last soviet cohort we can see nontraditional opposite trend. In the post-Soviet cohort the odds of attaining higher tertiary education do not depend statistically significant on gender while the chances of attaining full secondary education remain better for women as in previous cohort.

Social background in term of mothers' education proved to be the significant factor of educational inequality in all cohorts.

Class inequality (in terms of father's class) of educational opportunities at the level of tertiary education has declined between our first and second soviet cohorts. There is no change in inequality in the youngest post-soviet cohorts except of evidently decreasing opportunities for agricultural workers' offspring. Although it is impossible to decide with the present data which specific mechanisms lead to these results.

Determining exactly what factors played a role in the remaining, declining or strengthening inequality of educational opportunity is a demanding task for further research in Ukraine.

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## **СОЦІАЛЬНЕ ПОХОДЖЕННЯ ТА ОСВІТНЯ НЕРІВНІСТЬ В УКРАЇНІ**

*У статті аналізується нерівність освітніх здобутків дітей різного соціального походження, яка ніколи раніше не досліджувалася в Україні, ані за радянських часів, ані за часів незалежності. Результати ґрунтуються на репрезентативних даних щодо громадян 1930–1980 років народження. Для вияву динаміки освітньої нерівності порівнювалися освітні здобутки представників трьох квазі-когорт, двох радянських і однієї пострадянської. Результати свідчать про суттєву соціальну нерівність та залежність можливостей здобуття вищої освіти від чинників соціального походження індивідів, фіксовані як рівень освіти і класова належність батьків, незважаючи на факт широкого доступу, а згодом обов'язковості загальної середньої освіти.*