

# **Educational careers of Estonians and Russians**

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## **1. Introduction**

One of the most basic questions of integration research is whether the life circumstances of immigrants and natives have converged or diverged. Educational attainment is of key importance for the integration of immigrants and their descendants because education substantially shapes immigrants' labour market outcomes. Ethnic educational inequality is a widespread phenomenon, characterizing numerous school systems throughout the world (see Heath & Brinbaum 2007).

The substantial disadvantage of the first generation of immigrants has been explained by the lack of fluency in the language of the host country, foreign educational credentials and foreign work experience. The main conclusion has been that their disadvantages in the labour market may not necessarily be indicative of discrimination, but may reflect their lack of resources (Heath & Cheung 2007). In most western European countries, the disadvantage is decreased for the second generation who have grown up and attained education in the country of destination, as they are more fluent in the destination language and may have broader social networks (Crul & Vermeulen 2003; Heath & Cheung 2007). While members of the second generation attain better results than those of the first generation, children of immigrants still experience considerable disadvantages.

The educational outcomes of the second generation provide a challenge for explanations of educational inequalities in the western academic literature (see Ogbu 1997; Kao & Thompson 2003; Modood 2004; Portes & Hao 2004; Heath & Brinbaum 2007). Disadvantages of the second generation in education in western European and other immigrant countries have been explained by different mechanisms. For various countries, it has been found that ethnic disparities in education are largely the result of differences in parents' educational and social background (Kao & Thompson 2003; Kristen & Granato 2007; Phalet et al. 2007). Lower educational attainment may result primarily from class origin rather than from genuine ethnic traits (Kalter et al. 2007). Disadvantaged social class origins and low education in the parents' generation lead to poorer educational attainment in the second generation (Alba et al. 1994; Heath & McMahon 2005; Hout 2005). Therefore there is intergenerational continuity in patterns of gross disadvantage. The sociology of education tends to explain the effect of social origin on educational attainment by either structural or cultural factors. The structural explanations focus on differences in the distribution of resources (first of all material resources), while cultural explanations focus on parental support and their skills in helping children with their school work, as well as knowledge about how to navigate the educational system.

These explanations emanate from the assumption that the first generation of classic labour migrants was negatively selected in terms of human capital. This is the case in most European as well as other immigration countries, e.g. the United States, Canada, or Australia. In much of Western Europe, guest worker programmes were introduced in the 1950s and 1960s. It means that large, relatively low-educated and poorly qualified migrant communities were established. The question is to what extent these commonly used explanations account for ethnic educational inequalities in Estonia. The patterns of immigration to Estonia differed from classic labour migration in many other Western countries. In the 1960s, immigration was promoted and controlled only via organized labour recruitment. The first flow of Russian-language immigrants served to shape a party and state elite dedicated to imperialist policies and to establish a loyal

bureaucracy in Estonia. Among the needed workforce, Estonia received numerous bureaucrats and high-ranking officials who were needed to oversee the implementation of Soviet policies both in the state administration and state enterprises (Kulu 2001). Many Russians migrated to Estonia right after getting vocational/higher education. It means that they had a high level of education. In the early 1980s, the educational level of arriving immigrants deteriorated substantially. The majority of them were young people without any vocational training (see Saar & Titma 1992).

In the Soviet period, parallel educational systems, which divided the population on the basis of language of instruction (Russian or Estonian), contributed to the segmentation of Estonian society. There was possible to attain all levels of education in Russian. Now there are schools with two languages of instruction up until higher education. It means that Russian language secondary schools are practically educational dead ends. From 2007, those upper secondary schools that used Russian as the language of instruction are bilingual, with the partial instruction of subjects in Estonian. This complexity is posing very different kinds of challenges in Estonia compared with most other European countries. It means also that most explanations for ethnic stratification formulated for western European societies cannot account for the situation in Estonia.

In this chapter, we take a closer look at ethnic stratification in the Estonian school system, focusing on the track chosen in secondary education and on the transition to higher education. We investigate whether the educational transitions of the second generation are related to differences in educational and social origin. The additional questions raised in this chapter are: Does the effect of social background vary between different ethnic groups? Does the Estonian language competence and Estonian citizenship of the parental generation have an impact on educational transitions of the second generation? We are also interested in whether there are tendencies of convergence or divergence between the educational attainment of ethnic groups over time. In order to give an overview of the changes over generations we compare the educational attainment of Estonians and Russians with their parents' educational level.

## **2. The Estonian context**

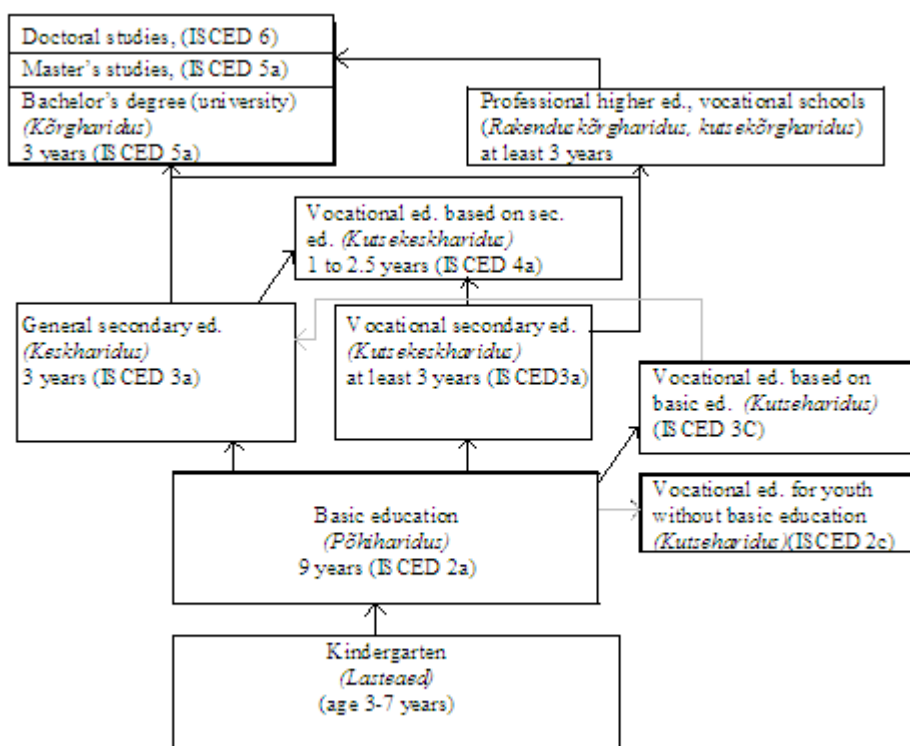
### *Overview of Estonian educational system*

Pre-school education is not compulsory in Estonia, however a large percentage of children are enrolled in pre-school institutions. In 2007, 86 per cent of children aged 3-6 years attended kindergarten (Statistical Office of Estonia 2008). Compulsory education starts at age seven, when children must start their studies in basic school. Attending school is compulsory until age 17, or until graduation from basic school, if it is achieved before the age of 17. In the Estonian educational system, primary and lower secondary education are not differentiated and they form single level of basic education with 9 grades (Figure 1). Youth who have not completed basic education can attend vocational training where they also acquire basic education. Basic and secondary schools are mainly public schools, which are tuition free. After basic school, the educational system is divided into three tracks: general secondary education, vocational secondary education and vocational education<sup>1</sup>. The secondary education system in Estonia is quite stratified because it allows little mobility between programs.

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<sup>1</sup> Up to 1999 they could also opt for secondary specialized education.

According to the Education Law, everyone who has a diploma from an upper secondary school, a specialised secondary school, or a vocational secondary school, has the right to compete for admission to the universities and institutions of professional higher education. Although there are no legal restrictions for graduates of vocational secondary schools to apply to higher education institutions, vocational schools remain educational dead ends: their graduates have very low chances to attain higher tertiary education as well as their unemployment rate is higher compared with general secondary schools graduates. National examination grades at graduation from secondary education fluctuate from an average of 40.2 for vocational school graduates to 62.1 for graduates of general secondary schools (Estonian Centre for Examination and Qualification 2006). Since admission to higher education institutions is mainly based on the results of national examinations, the opportunities to continue studies are unequally distributed across school tracks.



**Figure 1. Estonian educational system**

Higher education is divided into professional higher education and academic higher education. Enrolment levels in tertiary education grew 168 per cent between academic years 1994/95 and 2005/06, which is among the largest growth rates among OECD countries (OECD 2006). The number of tertiary students relative to the population of individuals, in the five-year age group following secondary school-leaving, reached 64 per cent in 2003 (OECD 2007). There are several private higher education institutions in Estonia. In 2005/06, 20 per cent of students were studying in private universities and institutions of professional higher education. Students

in Estonia fall into one of two distinct groups. Either they occupy state-commissioned places and pay nothing for their tuition or they do not and pay the full costs of their tuition. The number of students paying tuition fees has increased in the 2000s as more than half of all students studied in non-state commissioned institutions in 2007 (Ministry of Education and Research 2008).

### *Ethnic groups in Estonian educational system*

Compared with western European countries, a very important specificity is that, in Soviet times, Estonia had two parallel educational systems that divided the population on the basis of the language of instruction (Russian or Estonian). Russian-language education is provided in public and private schools at all levels from pre-school to higher education. According to the Ministry of Education and Research, the number of pupils in Russian schools is continuously declining. In 1991, approximately 37 per cent of pupils studied in Russian schools, while in 2006, about 20 per cent of pupils study in them (Ministry of Education and Research 2008).

The Estonian government has recognised the need to harmonise these two systems. In 2007, the educational reform began, which aims to transition general secondary schools with Russian language of instruction into bilingual schools, where 60 per cent of studies will be in Estonian. According to legislation for the 2011/2012 academic year, the national curriculum for those entering 10th grade will comprise five courses in the Estonian language (Estonian Literature, Civic Education, Music, Estonian History, and Geography). Estonian-language instruction in at least Estonian Literature started from September 1, 2007 in the 10th grades of Russian-language schools (Ministry of Education and Research 2008). In 2007, 17 per cent of non-Estonian pupils studied either in ordinary Estonian schools or in language immersion classes (where education is predominantly in Estonian).

In public higher education institutions, the language of instruction is mainly Estonian. Graduates of Russian-language schools have no legal obstacles to studying in higher education institutions in Estonian. It is also possible to continue studies in the Russian language in private higher education institutions, where students have to pay tuition fees. As authors of *OECD Review of Tertiary Education in Estonia (2007)* maintain, given that the main higher education institutions do provide instruction mainly in Estonian, Russian-speaking school leavers find themselves at a disadvantage in accessing these schools. In 2007, while 55 per cent of Estonian-speaking school-leavers accessed a state-commissioned place in tertiary education, 48 per cent of Russian-speaking school-leavers did so (Ministry of Education and Research 2008). In 2007, 69 per cent of all students studying in Russian were studying in private higher education institutions (16 per cent of students studying in Estonian attended private institutions). In total, 11 per cent of all students in higher education are studying in Russian (Ministry of Education and Research 2008).

According to the census data from 1989, the average education level of non-Estonians residing in Estonia was significantly higher than the average education level of Estonians. The educational structure reflected the general occupational structure of Estonians and non-Estonians. The share of people with primary or basic education was significantly higher among the Estonians. In 2000, the situation has changed. The educational level of non-Estonians is somewhat lower; the differences in the educational level of non-studying youth in Tallinn are particularly large. Among non-Estonians, the proportion of youth with basic education is higher and the proportion of youth with higher education lower, compared with Estonians (see Table 1).

**Table 1. Educational level of different ethnic groups in 1989 and 2000**

Level of education	1989*		2000*		2000 non-studying youth (15-29) in Estonia		2000 non-studying youth (15-29) in Tallinn	
	Estonians	Other ethnicities	Estonians	Other ethnicities	Estonians	Other ethnicities	Estonians	Other ethnicities
Primary education	17	14	4	4	2	1	1	1
Basic education	17	15	12	13	20	17	10	15
Secondary education**	27	28	31	28	32	31	37	33
Vocational education			7	8	13	18	10	15
Specialized secondary education	21	26	20	26	20	21	22	24
Higher education	18	17	26	20	12	9	20	11
Total	100	100	100	100	100	100	100	100

\*15-64 year olds.

\*\*1989 general secondary and vocational secondary education together.

Source: 1989 and 2000 Census data.

There are ethnic differences in the proportion of studying youth (see Table 2). In age groups 15-19 and 20-24, the percentage of studying youth is much higher for Estonians than for other ethnic groups. More than a quarter of Estonians aged 20-24 year old, are studying in higher education institutions. Among Russians belonging to the same age group, this percentage is substantially lower. Differences in Tallinn are particularly large. The data seems to indicate that there is unequal access to higher educational institutions between Estonians and non-Estonians.

**Table 2. Proportion of studying youth according to age group and ethnic group in Tallinn and in Estonia, %**

	Estonians	Russians	Other ethnicities
<b><i>In Tallinn</i></b>			
Age group 15-19	90	82	85
Age group 20-24	49	30	33
In higher education	41	24	27
Age group 25-29	20	7	10
In higher education	19	6	9
<b><i>In Estonia</i></b>			
Age group 15-19	87	83	84
Age group 20-24	36	25	29
In higher education	28	18	22
Age group 25-29	13	6	10
In higher education	12	4	9

*Source:* 2000 Census data.

### **3. Accounting for ethnic differences in education**

Most explanations of ethnic educational inequality start from various models of educational decisions (Breen & Goldthorpe 1997; Esser 2004). An individual's educational choices will include considerations of the possible costs and benefits of alternatives in the education system, and of the probabilities of different outcomes, such as educational success or failure. According to these models, the costs, benefits and probabilities should vary between immigrants' descendants and the native population. Therefore, transition rates should differentiate across ethnic groups. In addition, transitions in the educational system might be affected by a process of cultural reproduction. The second generation may lack access to the heritage culture of the native population that, according to Bourdieu, is crucial for educational success.

The finding that the general processes of social reproduction are related to lower educational attainment of the second generation is common, and therefore, most western European authors start to explain ethnic disadvantages with arguments that focus on the processes by which social and educational origin affect transitions in the educational system (Fekjær 2007; Kristen & Granato 2007; Kristen et al. 2008). A central argument connecting social background with children's educational attainment, refers to differences in the distribution of resources and characteristics that are relevant to educational decisions. Economic resources in the family are one of the factors influencing perceived costs and benefits (Goldthorpe 2000). Apart from financial conditions, other types of parental support vary by social origin. In addition, there is a group of arguments that concerns class differences in educational aspirations. It is presumed that the higher social classes favour, the more demanding and prestigious qualifications (Boudon 1974; Gambetta 1987).

However, these explanations linking social origin with educational choices are not applicable when accounting for the ethnic educational inequalities in Estonia. As we noticed

above, the first generation in Estonia was not negatively selected in terms of their education and occupational position. Therefore, social disadvantages may not account for ethnic disadvantages in educational transitions in Estonia. On the other hand, as the Russian minority situation in the labour market has been more vulnerable, their returns from education in terms of economic success have been lower (see Leping & Toomet 2008). Therefore, it is possible that the parents of Russians need an even higher educational level than Estonians to produce similar educational opportunities for their children.

In most western countries, the educational disadvantage for ethnic groups persists even after taking into account parental socioeconomic position (Heath & Brinbaum 2007). This means that differences in socioeconomic background do not explain all of the ethnic educational disadvantages. Some authors explaining these differences refer to so-called primary effects of stratification<sup>2</sup>. They argue that the lack of the requisite cultural capital, and particularly parental lack of fluency in the language of the majority population, may make it difficult for children of some immigrant groups to succeed in their schoolwork, and may lead to lower achievement in test scores than would be expected based on their parents' socioeconomic position (Van de Werforst & Van Tubergen 2007). There might also be secondary effects of stratification on educational choices. Immigrant parents lack familiarity with the education system and are less informed about educational choices. It makes the investments in education unlikely, as the parents' low level of information strongly reduces success expectations (Esser 2004). Heath and Brinbaum (2007) use the term cultural dissonance when referring to this potential explanation. Once again, this explanation does not seem adequate to account for ethnic educational inequalities in Estonia, because there are no considerable differences with regard to achievements in school education between pupils studying in Estonian and Russian. In 2007, there were no considerable differences between pupils studying in Estonian and Russian with regards to average points received on state exams (final exams at secondary education graduation), with the exception of geography, foreign languages and social sciences exams (where the results of Estonian-language schools graduates were noticeably higher) (Estonia/State Centre for Exams and Qualification 2008). Furthermore, there were not many differences between ethnic groups with regard to the practical involvement of parents in studies (Lindemann 2008).

The second group of arguments concern ethnic differences in educational aspirations (Kao & Thompson 2003). However, some authors indicate that rather than referring to ethnic disadvantages, aspirations may account for a group's more ambitious choices and exceptional educational success (Kao & Tienda 1998; Kao 2004; Brinbaum & Cebolla-Boado 2007; Kristen et al. 2008). In order to explain this difference, some authors point to positive cultural values and beliefs about the benefits of education (Caplan et al. 1991). Other authors refer to positive selection on immigrants in terms of their motivation to succeed (Kao & Tienda 1995). Additionally, Sue and Okazaki (1990) state that education is functional for upward mobility particularly when participation in other avenues for advancement has been difficult. Results of the survey 'Integration of Estonian society: Monitoring 2008' seem to indicate that, in Estonia, the Russian-speaking population is also a little bit more oriented towards tertiary education compared to Estonians (not controlling for their socioeconomic position) (Saar 2008). Thus, there is no reason to expect that ethnic inequalities in education can be explained by ethnic differences in the educational aspirations.

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<sup>2</sup> The distinction between primary and secondary effects has been put forward with regard to class inequality in schooling (Boudon 1974). This distinction maps on to a distinction between the determinants of early-demonstrated ability and the determinants of continuation rates into secondary and tertiary education (controlling for test scores).

The secondary effect concerns not only aspirations but real choices made in branching points comprising the educational system. Boudon (1974) sees the choices as being determined via the evaluation that children and their parents make of the costs and benefits of, and the chances of success in different tracks. However, even among children who reach the same achievement and have similar aspirations, secondary effect will still produce ethnic differences in attainment. Thus children who reach the same achievement and have similar aspirations may still make different educational choices. Educational decision-making remains conditioned by the situation in which it takes place, and this is likely to lead to differing evaluations of costs and benefits as well as the chances of success (Goldthorpe 2000: 174). The national institutions, e.g. the educational systems, play a central role in this evaluation process. We suppose that the rational basis of educational choices determined by institutional conditions might be the main mechanism producing ethnic educational inequalities in Estonia.

An additional mechanism, human capital externalities, is also used to explain inequality between ethnic groups (Borjas 1995). Thus the representatives of the second generation may be affected not only by parental education and occupational group, but also by the average education of the ethnic group in the parents' generation. The ethnic externality might operate through the ethnic neighborhood, which will tend to reduce the educational attainment of the second generation (for example through a process of lowering expectations). In Estonia, there is a clear territorial ethnic segregation as well as a segregation of schools according to the language of instruction (ethnicity). Nevertheless we are suspicious of the claim that the ethnic composition of school is an indicator of the different learning opportunities children confront in different classrooms in Estonia. This is due to the fact that in Estonia, Russians are not concentrated in neighborhoods predominantly composed of low-income families, which will reduce their educational attainment because of the poorer quality of schooling. There is no reason to believe that the ethnic composition of the school may have impact on children's educational performance. In addition, the educational level of the parental generation of Russians was even higher compared with Estonians (see Table 1).

Finally, institutional conditions have an impact on the second generation's educational attainment as well. Some institutional regulations may apply only to the children of immigrants, however institutional rules that apply to all the children may have a different impact on ethnic groups. We suppose that this group of arguments is more adequate to account for educational differences between ethnic groups in Estonia. The most important obstacle to overcome in order to achieve ethnic educational equality is that the main higher education institutions do provide instruction mainly in Estonian. It means that educational opportunities of persons not proficient in Estonian can be limited. School reform supports the idea that the Russian students must acquire at school a good command of the Estonian language. But the situation looks different: according to the data from the survey 'Integration of Estonian Society: Monitoring 2008' only 27 per cent of 15-29 year old Russian-speaking respondents estimated their knowledge of Estonian as fluent; and nearly a quarter have poor Estonian language proficiency. The assessment on the quality of teaching of Estonian in school was negative: more than a third of Russian-speaking respondents thought that they (or their children) do not learn enough Estonian at school (Saar 2008).

The continuation of studies in private higher education institutions where students pay tuition fees is costly. Insufficient proficiency in Estonian generally means that continuing studies is possible only if the individual has enough economic resources. The amount of economic resources that the youth has an opportunity to use is often related to parental background. As inflow into higher education institutions is mostly from general secondary schools, lower success expectations for transition to higher education may also affect the choice of the secondary school

track of Russian-speaking youth, decreasing their probability of continuing their studies at general secondary schools. They may prefer to get vocational secondary education because continuing their studies in general secondary education is not rational for them.

There have been expectations that restricted transferability of origin-specific educational resources may affect immigrant families' ability to make educational investments (Heath & Cheung 2007). The parents of the second generation may not speak the host country language and therefore may be lacking country-specific human capital. Educational knowledge about the functioning of the school system might also be an important factor leading immigrant families to less-informed educational choices. It has been argued that this reasoning applies in particular to the first generation, but it may also affect the education of the second generation who, especially at younger ages, very much rely upon their parent's knowledge and school support (Kristen & Granato 2007). Parental lack of fluency in the language of the native population may make it difficult for children of the same immigrant group to succeed in their schoolwork and may lead to lower achievement in their test scores (Heath & Brinbaum 2007). The existence of two parallel educational systems with Estonian and Russian language of instruction makes this reasoning questionable in Estonia, especially for transition to general secondary education.

The second question is whether social background would have the same effect for both ethnic groups. Social background may matter less for the second generation, because their parents' social standing declined after migration. Education of the children may give the family an opportunity to reclaim what the parents have lost through migration (Platt 2005). Another possible reason is that minority parents might lack country-specific cultural capital, which disadvantages their children. However, some authors indicate that it is also possible that social background could have a stronger effect on educational attainment among minority youth, because some minority parents will experience discrimination and language problems in a new society (Fekjær 2007). This implies that the first generation with high social position has had to work harder to achieve their position than their counterparts in the majority group. Those who have managed might have extra resources (for example social networks). This means that the minority youth with high parental education and position may have the advantage. Educational expansion may also increase the impact of social background on educational attainment among second generation. Kalter and Granato (2002) found that educational expansion has led to an overall increase of educational inequalities between ethnic groups. There are some similarities with the concept of 'maximally maintained inequality' in education (Raftery & Hout 1990). These authors argue that class differences in educational attainment will only begin to decline when participation in a given level of education of children of more advantaged backgrounds reaches saturation. We suppose that the same assumption is true also for different ethnic groups increasing the impact of social background on educational attainment of the minority ethnic group.

More precisely we derive the following hypotheses out of our theoretical discussion.

*Hypothesis 1.* Looking at the historical case of migration to Estonia, we expect no ethnic differences in educational attainment of the parental generation.

*Hypothesis 2.* Due to the transformation of Estonian society and the growing importance of country specific human capital, we expect that educational inequality has substantially increased for the second generation.

*Hypothesis 3.* We expect to find significant gross as well as net effects of ethnicity on transition to general secondary schools as well as to higher education institutions.

*Hypothesis 4.* We suppose that parents' education and occupational group have a stronger impact on the educational choices of Russian youth.

*Hypothesis 5.* We suppose that parental country-specific human capital has no impact on the educational transitions of the second generation.

#### 4. Variables and method

We are using dissimilarity index to compare educational composition of parental generation and second generation and to indicate trends of convergence or divergence. This measure attempts to capture the degree of social inequality in one single variable. The index of dissimilarity is defined by

$$D = \frac{1}{2} \sum |A_k/A - B_k/B|,$$

where  $j$  is the number of categories of the variable at interest,  $A$  is the number of persons belonging to group  $A$ ,  $B$  is the number of persons belonging to group  $B$ ,  $A_k$  is the number of persons belonging to group  $A$  and category  $k$ , and  $B_k$  is the number of persons belonging to group  $B$  and category  $k$ .

In order to investigate the transition patterns in the education system, we first look at the sub-sample of young people who enter secondary education and investigate whether they select the general secondary education rather than vocational track. Second, we analyse whether students enter higher educational institutions or not. The latter category comprises individuals who take up vocational training or decide not to pursue further education.

We use a social class schema that takes into account the social class of both parents. Our primary measure of social class is based on the occupational group of one's mother and father when the respondent was 15 years old. When one parent was absent from the household or when data on one parent is missing, the single parent, or the parent for whom data is available, determines the class origin of the child. In line with the dominance approach, the educational attainment of the child does not differ significantly once the class of the parent whose occupational group was higher is taken into account (see Phalet et al. 2007). Thus, we are using a fourfold class schema:

- Manager and professional: at least one parent in professional or managerial occupations;
- Lower non-manual worker: at least one parent in routine non-manual occupations; the other parent in similar occupation or in skilled or unskilled manual work, or not working;
- Skilled manual worker: at least one parent in skilled manual work; the other parent in similar manual work, or in unskilled manual work, or not working;
- Unskilled manual worker: at least one parent in unskilled manual work; the other parent in similar manual work, or not working.

In addition, the highest educational qualifications of the parents are also measured.

Our measure derives four categories:

- at least one parent with higher education;
- at least one parent with vocational or professional secondary education; the other parent has similar or lower qualifications;
- at least one parent with general secondary education; the other parent with similar or lower qualifications;
- both parents, or a single parent, with primary or basic education.

In the analysis we are not controlling for the respondent's Estonian language proficiency. Our data about educational transitions is retrospective, but language skill is measured at the time of the interview. Therefore it is not possible to give adequate estimation to its influence on transitions in educational system.

Estonian language proficiency and Estonian citizenship serve as a proxy of parental country-specific human capital. We are using following categories for Estonian language proficiency:

- very good
- good
- moderate
- very bad.

We also have included the data about Estonian citizenship of both parents into analysis:

- both parents have Estonian citizenship
- one parent has Estonian citizenship
- both have not.

Regarding the transition to higher education we consider the additional variable of secondary school track.

In considering ethnic minority disadvantage in educational system it is important to distinguish between three distinct concepts (see Heath and Cheung 2007):

- gross disadvantage
- net disadvantage after controlling for social background and other individual characteristics
- differential impact of social background.

We use logistic regression analysis including variables into model step by step to separate gross and net disadvantages. In a most simple baseline model ethnicity is entered as a predictor of transitions in the educational system. In the subsequent models, we test the role of various kinds of parental resources as explanatory variables.

## 5. Results

### *Educational attainment of parents and second generation*

Table 3 gives an overview of the educational composition of the parental and second generations. We use an index of dissimilarity to describe the extent of differences between ethnic groups. It appears that differences in educational attainment of the two ethnic groups are larger for second generation than they were for their parents. In particular, dissimilarity has increased for women. In the generation of mothers, there are only small differences in educational attainment between ethnic groups. The educational level of Russians is even a bit higher: Russians more often have mothers who have completed higher education, while more Estonians have mothers who have finished only basic school or less. On the other hand, the dissimilarity of women's educational attainment between second generation Russians and young Estonians is much higher with the advantage going to the Estonians. It appears that Estonian women tend more often to attain higher education, while Russian women more frequently complete professional or vocational secondary school.

The index of dissimilarity of educational attainment is also raised for men. In the generation of fathers, Estonians tend to more often have basic education or less, while Russians more often have higher education. Results indicate that among Russian men, educational attainment has extensively changed over the course of a generation. In the case of the second generation, fewer Russian men have attained higher education compared to Estonian men. Russian men, similarly to Russian women, more often attained vocational or professional secondary education, while Estonian men more frequently complete general secondary school. These results are in accordance with data of the censuses presented in Table 1. Thus, contrary to most of the western European countries, the educational gap between Russians belonging to second generation and young Estonians has grown compared to their parents generation (to first generation immigrants and Estonians).

**Table 3. Educational composition of parental and second generation, %**

	Father		Men		Mother		Women	
	Estonians	Russians	Estonians	Russians	Estonians	Russians	Estonians	Russians
Primary and basic	14.7	7.1	16.2	13.3	9.2	5.2	10.9	13.8
Vocational and professional secondary	42.4	44.7	39.6	56.2	42.6	43.4	33.6	47.7
General secondary	22.7	23.3	23.4	18.1	23.1	23.6	20.0	15.9
Higher	20.2	24.9	20.7	12.4	25.1	27.8	35.5	22.6
Total	100	100	100	100	100	100	100	100
Index of dissimilarity	.073		.161		.038		.170	

*Source:* Own calculations based on TIES.

### *The influence of parental resources on transitions in educational system*

As the educational attainment of second generation Russians and young Estonians is rather different, we examine how the ethnicity and social background of parents influence the transitions of the second generation in the education system. We carried out logistic regression models in order to estimate to what extent the ethnicity or social background of parents has an effect on transitions to secondary and higher education. In the case of choices about secondary education we looked at the odds of transition to general secondary school versus to other types of secondary education (vocational and professional). We also estimated the odds of transition to higher education compared to not continuing studies in higher education after the attainment of secondary education. Variables were added into the analysis step by step starting with the model for gross effect of ethnicity. Next, we added demographic characteristics such as gender, age and region and at last variables about parents' social background. Figure 2 presents the odds ratios of transition to general secondary school and to higher education comparing the effect of ethnicity in different models and illustrating what happens to the initial ethnic disadvantages when taking the relevant background variables into account. Values below 1 indicate that the second

generation's chances of transition are below those of Estonians. Model fit is showed in Appendix 1.

Figure 2 indicates that there is a clear gross effect of ethnicity on transitions in the education system. Compared to Estonians, Russians are less likely to choose studies in general secondary school as opposed to other types of secondary education. In addition, Russians' odds of transition to higher education are lower than Estonians. Controlling for demographic characteristics does not change the strong effect of ethnicity. In the case of the odds of transition to higher education, the effect of ethnicity even increases slightly. This indicates that there are significant differences in transition to higher education between Russians and Estonians, who are characterised by similar age, gender and place of residence.

Adding parental class and education into the model does not reduce the strong effect of ethnicity. Therefore, if Russians and Estonians have parents with similar educational level and social class, Russians tend to continue their studies less often in general secondary education instead of another type of education. Also in the case of similar parental resources, Russians' odds of transition to higher education are lower. Russians still encounter disadvantages after taking account of social background. Thus, as expected, different social backgrounds does not explain ethnic differences in educational transitions in Estonia. It means that the story of the second generation's lower educational attainment is very different from most Western European countries, where the low performance of the second generation is primarily explained by negative selection in terms of parental education and social position.

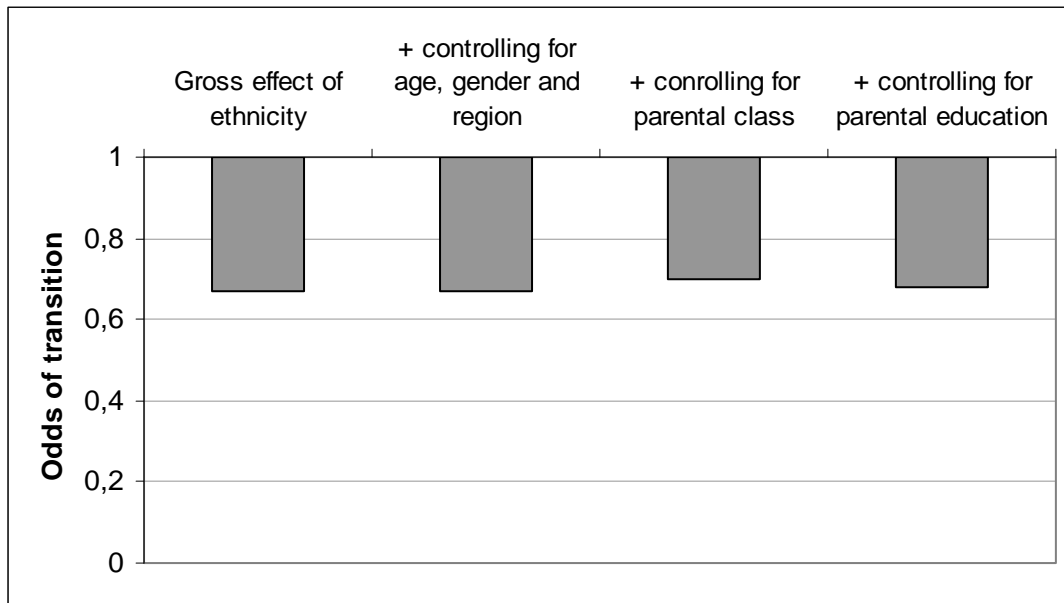
In order to specify whether the influence of parental resources on transitions in educational system varies between ethnic groups, we added interactions into the logistic regression model (see Appendix 1). This improves the model fit to some extent in the case of both models, which indicates that the effect of social background on educational choices differs for Estonians and Russians. The models with interaction terms (not presented here, available from authors upon request) show that the impact of social background on transitions in educational system is stronger for Russians.

It is also important to note that adding type of secondary education into the model about transition to higher education does not change the strong effect of ethnicity. It shows that even in case of similar type of secondary education, Russians still less likely to continue their studies in higher education.

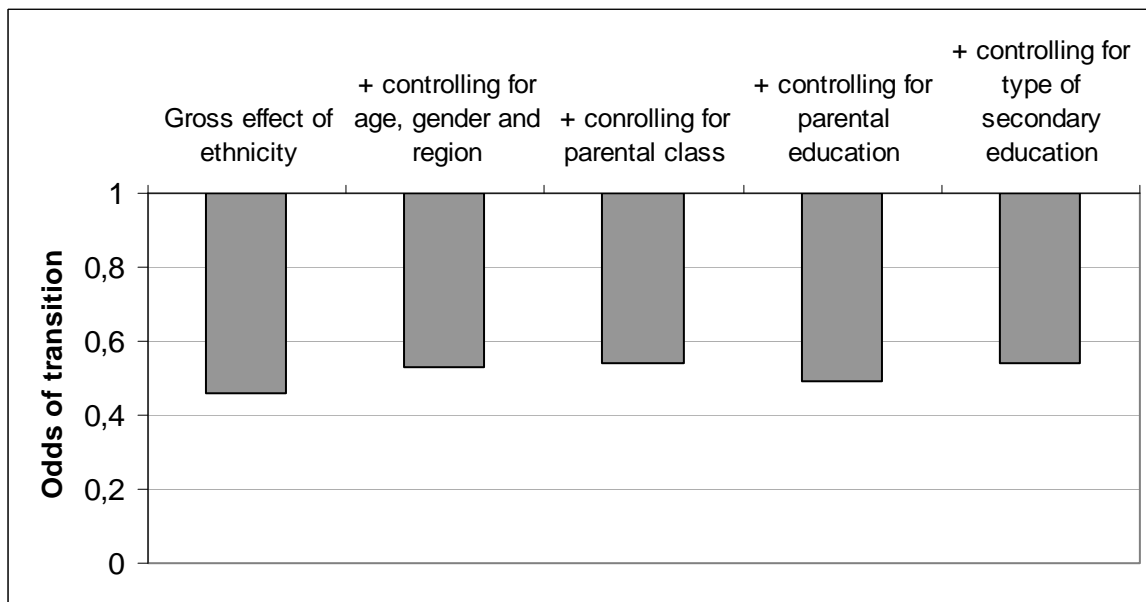
We calculated the probabilities of transition to general secondary education as well as of transition to higher education for Estonians and Russians using models with interaction terms. The probability of transition to general secondary school is 0.74 for Estonians and much lower for Russians (0.66). The gap is even bigger for transitions to higher education (0.36 and 0.19 respectively).

Figure 2. Gross and net ethnic educational disadvantage

(a) Odds of transition to general secondary school (vs. other type of secondary education)



(b) Odds of higher education (vs. not continuing studies in higher education after attainment of secondary education)



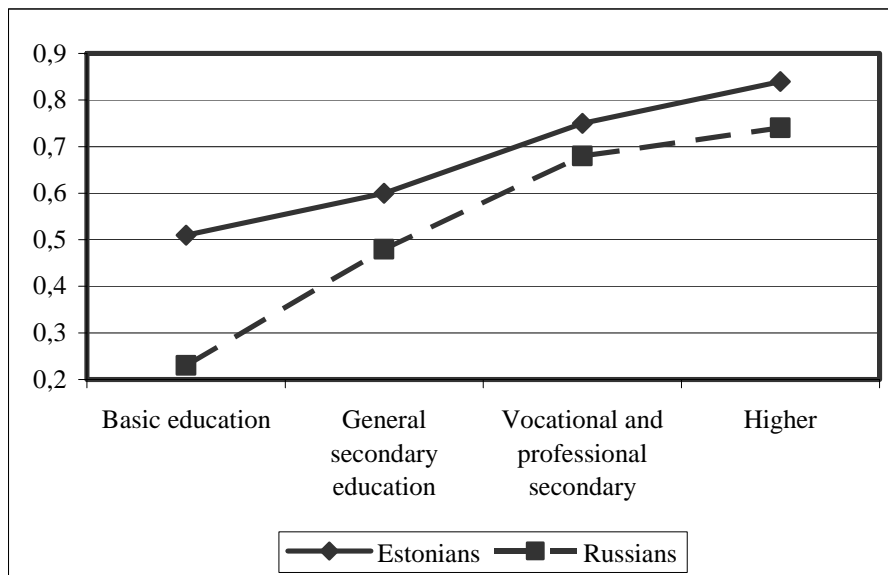
*The role of parental resources in choices of secondary education*

Figure 3 specifies the relationship between probability to continue studies in general secondary education and social origin. Results show that Estonians and Russians with similar parental education continue studies in general secondary education with different probabilities. The largest difference between ethnic groups appears among youth whose highest parental education is basic education or less. Parents with basic education indicate a very low probability to enter to general secondary education for Russians. On the other hand, for Estonians with similar parental education, the probability of continuing studies in general secondary school is about 0.5. Russians who have parents with general secondary education, are less likely to continue their studies in the general track of secondary education when compared to Estonians. The most likely to enter into general secondary school are Estonians whose parents have higher education. Young Russians whose parents have higher education continue their studies in general secondary school with the same probability as young Estonians whose parents have vocational or professional education.

The probability of transition to general secondary school also differs among Estonians and Russians whose parental occupational group is similar. Estonians, whose parents are managers or professionals, continue most probably their studies in general secondary school. Russian youth with similar parental occupation group enter into general secondary school also with quite high probability, although this is about 0.1 lower than Estonians. In the case of youth whose parents are skilled workers, there is almost no difference between ethnic groups. On the other hand, those Estonians whose parents belong to the group of unskilled manual workers<sup>3</sup> are less likely to enter into general secondary education compared to Russians with similar parental education.

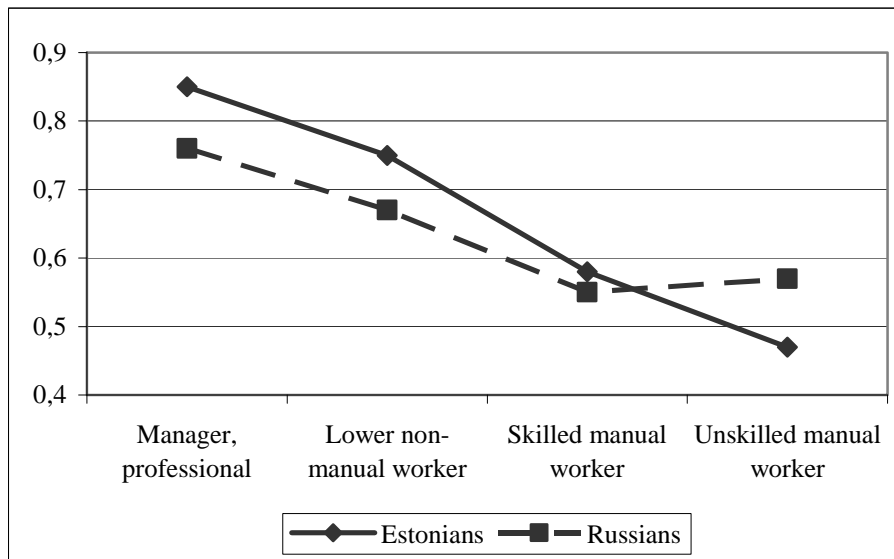
Figure 3. Probabilities of transition to general secondary school by ethnicity and social origin

Parental education



<sup>3</sup> There were very few unskilled manual workers among parental generation.

## Parental occupational group



The previous figure shows that social origin might have a different influence on the probabilities of ethnic groups to enter into general secondary education. Therefore, we calculated the effects of social background characteristics on the choice of secondary school separately for Estonians and Russians. Table 4 gives an overview of how these characteristics influence the probability of Estonians and Russians to continue their studies in general secondary education instead of other type of secondary education. We carried out also additional model for Russians, where Estonian language skill and citizenship of parents was controlled.

In general, the analysis shows some common trends among ethnic groups. In both ethnic groups, women and youth who live in Tallinn, continue their studies more likely in general secondary education. Russians aged 18-25 will choose more probably general secondary education than those aged 26-35. There are no age differences among Estonians.

Interestingly, parental occupation group has a stronger effect on Estonians odds to enter into general secondary education. There is no significant effect of parental occupation on Russians choice of secondary school. On the other hand, parental education has a significant influence on Russian youth odds to continue studies in general secondary education. We could explain this result with low correspondence between occupational group and education for Russians. Previous analysis also indicates that non-Estonians with higher education have considerably more difficulties in finding a higher professional or manager job (Saar & Kazjulja 2002). According to data from the Estonian Labour Force Survey a fifth of non-Estonians think that their educational level is higher than their job requires (Helemäe 2008).

Russians whose parents have general secondary education or basic education, continue less probably in general secondary school than those Russians whose parents have higher education. In the case of Estonians, there is disadvantage only for youth whose highest parental education is basic or less. The effect of parental education for Russians somewhat decreases after we added parents' Estonian language skills and citizenship into the model. Russian youth whose both parents have Estonian citizenship continue more probably their studies in general secondary school. Additional analysis indicated that the impact of this indicator is significant only in

Kohtla-Järve where the percentage of Russian youth who continuing their education in general secondary schools is substantially lower compared with youth in Tallinn (respectively 56 per cent and 78 per cent). Thus in the case of Russians who have parents with Estonian citizenship, their chances to enter to secondary school are equal to Estonians. However, we found no significant influence of parents' Estonian language skills on the choice of secondary school. On the other hand, we analyse respondents who moved to secondary school in rather different time periods. Some respondents belonging to the older age group made the decision about the secondary school track already at the beginning of 1990, while others made it in 2000s. The influence of parental country-specific human capital may vary during these years.

Table 4. Transition to general secondary education (vs. other types of secondary education): logistic regression models

	Estonians	Russians Model 1	Russians Model 2
<i>Gender</i>			
Male	-.89***	-.66***	-.62**
Female (reference group)			
<i>Age group</i>			
18-25	-.01	.90***	.89***
26-35 (reference group)			
<i>Region</i>			
Tallinn	.53**	1.12***	1.10***
Kohtla-Järve (reference group)			
<i>Parental occupational group</i>			
Manager, professional	1.62**	.76	.76
Lower non-manual worker	1.20**	.46	.47
Skilled manual worker	.42	.06	.08
Unskilled manual worker (reference group)			
<i>Parental education</i>			
Primary, basic	-.98*	-2.12**	-2.02**
General secondary	-.60	-.72**	-.59
Vocational and professional secondary	-.10	.05	.16
Higher (reference group)			
<i>Estonian language skills of parents</i>			
Poor skills			.15
Rather poor skills			.10
Rather good skills			-.12
Good skills (reference group)			
<i>Parental citizenship</i>			
both parents have Estonian citizenship			.73**
one parent has			.41
both have not (reference group)			
Constant	.26	-.25	-.63
Pseudo R square	.16	.21	.22
Number of cases	488	426	426

Notes: \*\*\*effect significant at  $p < 0.01$ ; \*\* effect significant at  $p < 0.05$ ; \* effect significant at  $p < 0.10$ .

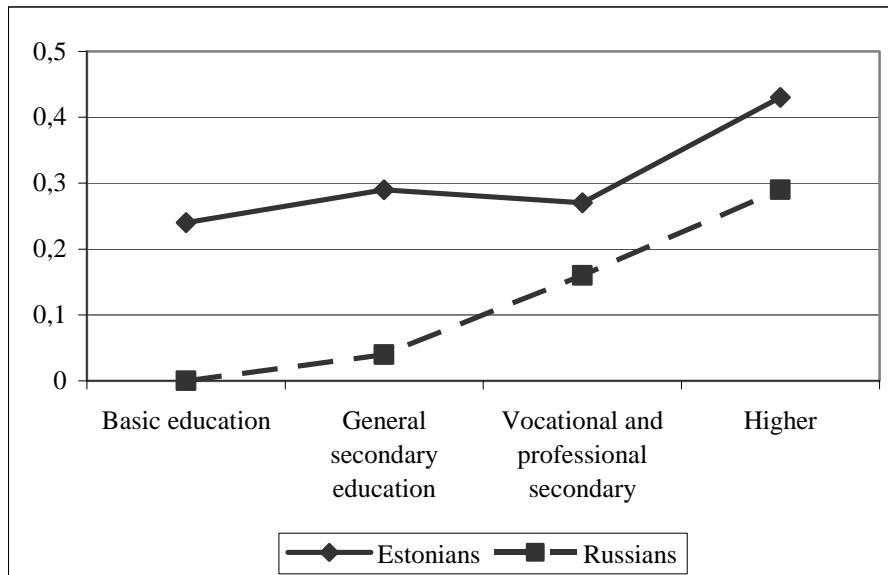
Source: Own calculations based on TIES.

*The influence of social origin on transition to higher education*

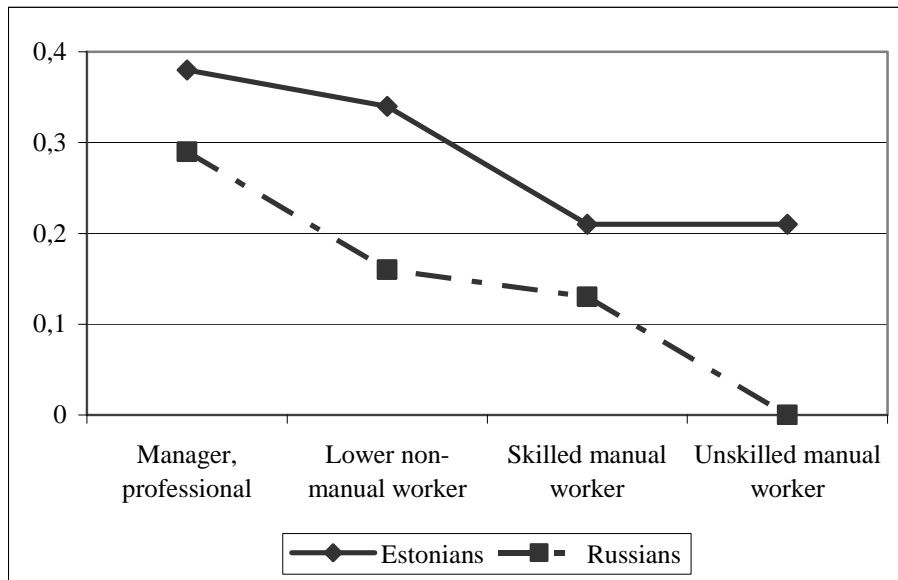
Figure 4 shows how the probabilities of transition to higher education differ by ethnic groups and social origin. Russian youth, whose highest parental education is basic or general secondary, continue their studies in higher education with a very low probability. Also, Russians whose parents are unskilled manual workers, have very low chances to enter to higher education. On the other hand, Estonians with similar social background have somewhat higher odds of continuing their studies in higher education. In both ethnic groups, the most advantaged are youth whose parents have higher education or whose parents work as managers or professionals. Those Estonians, whose highest parental occupational group is lower non-manual workers, have almost the same probability of continuing their studies in higher education as children of managers and professionals. There is no such tendency in the case of Russians. Young Russians whose parents belong to the group of lower non-manual workers enter to higher education with similar odds as children of skilled manual workers. Figure [?] seems to indicate that ethnic differences in transition probabilities are larger for youth with lower social background. Russians should have parents with higher education and high occupational position to improve their chances to attain higher education.

Figure 4. Probabilities of transition to higher education by ethnicity and social origin

Parental education



### Parental occupational group



As the effect of social background on the probability of continuing studies in higher education seems to be to some extent different for each ethnic group, we calculate separate logistic regression models for Russians and Estonians (Table 5). We compare the probability to continue studies in higher education with the probability to finish studies after attaining secondary education. It appears that younger age group and also men continue their studies less probably in higher education in both ethnic groups. There is no significant effect of region.

Although parental occupational group does not influence significantly youth entry into higher education, the effect of parental education is strong for both ethnic groups. The model for Estonians shows that the most disadvantaged are youth whose parents have basic education. Also, Estonians whose parents have vocational or professional secondary education, continue their studies less probably in higher education compared to youth whose parents have higher education. There is no negative effect of parental general secondary education for Estonians. This trend is reversed for Russians. Compared to those Russians whose parents have higher education, Russians with general secondary parental education have a lower probability of entering into higher education. Contrary to the findings for Estonians, there is no significant disadvantage in the continuation of studies for Russian youth whose parents have vocational and professional secondary education.

In order to control for the effect of country-specific human capital of parents on the probability to continue studies in higher education we added Estonian language skills and citizenship into the model for Russians. Surprisingly, there is some evidence that parents' rather poor Estonian language skills has a positive effect on the probability to enter into higher education, while poor language skill has no effect. On the other hand, the Estonian citizenship of parents has no effect on second generation odds to continue studies after secondary education. Thus, contrary to our expectations, parental country-specific capital has a very small impact on the transitions of Russian youth in educational system. We explain this result with the existence of private higher education institutions with Russian language instruction, where Estonian language proficiency is not important.

Table 5. Transition to higher education (vs. not continuing studies in higher education after attainment of secondary education): logistic regression models

	Estonians	Russians	Russians
		Model 1	Model 2
<i>Gender</i>			
Male	-.65**	-.58	-.68*
Female (reference group)			
<i>Age group</i>			
18-25	-1.92***	-1.73***	-1.78***
26-35 (reference group)			
<i>Region</i>			
Tallinn	.12	-.01	.06
Kohtla-Järve (reference group)			
<i>Parental occupational group</i>			
Manager, professional	.07	7.46	7.19
Lower non-manual worker	.29	7.15	6.91
Skilled manual worker	-.57	7.19	6.87
Unskilled manual worker (reference group)			
<i>Parental education</i>			
Primary, basic	-1.20*	-7.73	-7.17
General secondary	-.74	-2.51***	-2.34***
Vocational and professional secondary	-.89**	-.56	-.50
Higher (reference group)			
<i>Type of secondary education</i>			
General secondary	.29	8.50	8.54
Vocational secondary	-2.25***	4.80	4.78
Professional secondary (reference group)			
<i>Estonian language skills of parents</i>			
Poor skills			.28
Rather poor skills			.99*
Rather good skills			.49
Good skills (reference group)			
<i>Parental citizenship</i>			
both parents have Estonian citizenship			.55
one parent has			.15
both have not (reference group)			
Constant	.85	-15.09	-15.60
Pseudo R square	.34	.42	.44
Number of cases	332	330	330

Notes: \*\*\*effect significant at  $p < 0.01$ ; \*\* effect significant at  $p < 0.05$ ; \* effect significant at  $p < 0.10$ .

Source: Own calculations based on TIES.

## 6. Conclusion

Most researchers agree that tendencies of convergence or divergence between different ethnic groups are dependent on a set of contextual and historical conditions (Reitz 1998). National contexts vary widely in the types of opportunity they offer to the second generation. Estonian society during the Soviet period was ethnically segmented, e.g. two parallel societies existed. The education system was also divided into two parts on the basis of the language of instruction. This parallelism inherited from the Soviet period might have an impact on educational paths of different ethnic groups in contemporary Estonia.

In most traditional immigration countries, there are tendencies of convergence between natives and immigrants (Thomson & Crul 2007). With regard to schooling and labour market, mostly the first generation was stacked at low levels of the social hierarchy. It means that ethnic differences have decreased between the first and second generations. It is not the case in Estonia. We have found that second generation Russians' dissimilarity to Estonians in terms of education has increased compared to their parents generation. There were very slight ethnic differences in educational composition of parental generation in favour of Russians. Ethnic inequalities have emerged for second generation, as Russians' situations have become more disadvantageous.

In western European countries, social background appears to be an important explanation for ethnic differences in educational attainment. As expected in Estonia, this explanation is not adequate to account for the educational differences between Estonians and Russians because the first generation of immigrant population in Estonia is very different from traditional low-educated first generation immigrants in Western Europe. Their educational level was even somewhat higher compared with Estonians. However, this does not mean that the processes of social reproduction are not significant in Estonia. Social background influences the educational opportunities of Estonians and Russians, but it is not a reason behind more disadvantaged situation of second generation Russians.

We suppose that changed institutional conditions have had most important impact on the second generation's educational attainment by decreasing their possibilities to attain higher education. After 1991, instead of a gradual change in the education system, the government chose to start a quick transition to teaching in only Estonian language in higher education institutions. At the same time, the quality of Estonian language instruction in Russian secondary school was rather poor. Although there are no legal restrictions in access to any level of education for immigrants in practice, in higher education opportunities for persons not proficient in Estonian are limited. Russian youth attaining education in secondary school with Russian tuition can continue their studies in public higher education institutions that provide instruction mainly in Estonian or in private higher education institutions where they could study in Russian but should pay a tuition fee. It means that these Russian-speaking school leavers, who do not have sufficient Estonian language skills, find themselves at a disadvantage in access to higher education. We suppose that the termination of public education in the Russian language at the secondary level as well as decreasing follow-ups to higher educational institutions has contributed to the lowering of the educational level of young Russians.

The occurrence of ethnic differences in educational transitions in Estonia can be seen to have a rational basis once the implications of the resources, opportunities, and constraints are taken into account. The special situation in Estonia after structural changes and especially after transition to Estonian language teaching in public higher education might have reduced actual opportunities as well as the success expectations of Russian youth. Even in the case of strong investment motives and the existence of resources, making investments in education is less probable for Russians due

to low success expectations. The threshold could be only overcome by a clear increase in opportunities and success expectations. The data of the survey 'Integration of Estonian Society: Monitoring 2008' confirms that only a quarter of non-Estonians think that the opportunities for non-Estonians to attain higher education are equal to those of Estonians (Saar 2008). The perception of injustice may have an impact on the educational choices of Russian youth, making it rational not to try to attain higher education. Russians may adapt their choices to the perceived opportunity set. Swift (2003) calls this process adaptive preference formation. He indicates that even the belief that the mechanism of allocation is biased (in our case the belief that Estonians have better opportunities to attain higher education) is enough to make it rational not to try, independently of whether it is false or not (Swift 2003: 211). Of course the perceived opportunities are based on the actual opportunity set. In the Estonian case, the actual mechanism and perceptions of them seem to be at work.

Though educational investments represent one core factor in the stabilization of ethnic inequalities, they are not the only mechanism. With an approximately constant supply of higher positions available on the labor market, the queue for better positions becomes longer, while the supply of (formally) qualified applicants devalues the educational certificates and hence increases the relevance of symbolic qualification signals and of a certain kind of cultural capital (Boudon 1974). In the case of immigrants, ethnic membership exacerbates the situation by counting as a (negative) symbol for the actual value of an education certificate.

According to the model of intergenerational integration, the attractiveness of investments in receiving country capital depends on economic opportunities within the host society, or on the cultural evaluation of education by immigrants. Esser (2004) indicates that even if certain ethnic groups are able to ensure high success in education then ethnic inequalities may still appear in labour market success. It will reduce the evaluation of education and the success expectations for the following generation, despite a certain degree of cultural assimilation, e.g. language acquisition. As a result, clear mobility restraints are to be anticipated. Wiley (1970) has referred to this phenomenon as the 'ethnic mobility trap'. It is the stabilization of ethnic inequalities. We are afraid that it might happen in Estonia because there are differential returns on educational investments for Estonians and Russians (Leping & Toomet 2008).

Recently, there have been some reforms in the Estonian education system, which might have an influence on the educational decisions of second generation in future. Most public higher education institutions offer now a one-year advanced Estonian language course (with the provision of extra funding) to those students who have limited proficiency in Estonian and are granted a state-commissioned place. Other initiatives at the institutional level also include the possibility of writing exams in Russian and the formation of groups of Russian students. The second generation we are focusing on here did not profit from these institutional initiatives to reasonable degree. The transition to Estonian-language studies in Russian-language secondary schools, started in 2007, might have some impact on the educational opportunities of Russian-speaking youth. According to the survey 'Integration of Estonian Society: Monitoring 2008,' Estonians are more optimistic about the results of the transition. The Russian-speaking population is considerably more pessimistic. The survey 'Estonian-language studies in secondary schools with Russian as the language of instruction: awareness and attitude of non-Estonians and the factors influencing these' indicated that Russian-speaking respondents agreed on the positive long-term impact of the transition: the opportunities of continuing their education will increase, the competitiveness of students from Russian-language schools on the labour market will improve as a result of their Estonian-language studies. Regardless of the potential positive effects, the transition is viewed as an added burden and the psychological stress for students, as

well as the danger of incomplete knowledge was mentioned (Estonian Ministry of Education and Research 2008). However, surveys also indicated that there is a belief that Russian-speaking schools are not prepared for teaching subjects in Estonian and concern about the preparedness of the schools for conducting subject-teaching in Estonian. Transition to bilingual teaching in Russian secondary schools may improve Russian youth opportunities to attain higher education in longer perspective. The effect of reform probably appears after some time, while at first the transition to bilingual studies may reduce the quality of education in these schools.

Most likely, the gradual transition of the education system starting from lower levels of education would have avoided Russians' more disadvantageous situation in access to higher education. Data from the survey 'Integration of Estonian Society: Monitoring 2008' shows that about two-thirds of Russians support the idea that Estonian language studies should start already in kindergarten. Others argue that Estonian language studies should start in primary school. There are only a few Russians who believe that studies in Estonian should start not earlier than in basic or secondary school (Saar 2008).

In most western European countries, social background influences the educational attainment of ethnic minority and majority students in much the same way (see Heath & Brinbaum 2007). Our results seem to indicate that, in Estonia, the tendency is for parents' education and social position to be more important influences on the educational choices of minority youth. High social background might be essential for Russians to attain higher education, whereas Estonians might be able to attain higher education even in the absence of advantageous social origin.

Research in western European countries has shown that one important reason why immigrants might fare badly in the labour market and why their descendants, the second generation, might also experience disadvantages is lack of fluency in the language of the destination country, and more broadly, the lack of country-specific human capital (Heath & Cheung 2007). We do not find any distinct impact of Estonian language proficiency or Estonian citizenship of the parental generation on the educational opportunities of their children. It means that, in Estonian context, the most important factor is general human capital of parents.

Many authors indicate that with the establishment of ethnic inequalities, structurally grounded ethnic conflict taking various forms (from a emotional reactive ethnicity to forms of everyday ethnic hostility, attempts at political participation, establishment of minority rights and separatist movements) will materialize (Hechter 2000; Esser 2004). According to Esser (2003: 27), the prerequisite for ethnic conflict and political ethnification is an ethnic definition of the discrimination experienced, e.g. via the ethnic framing of a given structural situation. As we noticed before, Russians perceive injustice in education. This may lead to comparatively high levels of reactive processes and the potential for ethnic conflict in Estonia.

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Appendix 1. Stepwise logistic regressions: model fit.

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
<i>Transition to general secondary education</i>						
Ethnicity	X	X	X	X	X	
+gender, age, region		X	X	X	X	
+parental occupational group			X	X	X	
+parental education				X	X	
+interactions ethnicity*social origin					X	
<i>Model fit</i>	.01	.11	.15	.17	.18	
<i>Transition to higher education</i>						
Ethnicity	X	X	X	X	X	X
+gender, age, region		X	X	X	X	X
+parental occupational group			X	X	X	X
+parental education				X	X	X
+type of secondary education					X	X
+interactions ethnicity*social origin						X
<i>Model fit</i>	.04	.15	.20	.23	.36	.40

Source: Own calculations based on TIES.