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# DOES FINNISH EDUCATIONAL EQUALITY EXTEND TO CHILDREN OF IMMIGRANTS?

## *Examining national origin, gender and the relative importance of parental resources*

**Abstract**

This article examines the achievement of immigrants' children in schools in Finland at the end of compulsory education. Results suggest that differences between groups are relatively small after controlling for parental resources. However, parental education has a smaller effect and parental income a larger one for children of immigrants than the majority. This reveals a disadvantaged group with immigrant parents who have high education levels but low incomes. Gender differences are smaller among children of immigrants than the majority. This is partly due to girls from certain national origins being particularly disadvantaged by non-employed mothers. Overall, children of immigrants can be seen to benefit from the relatively equal Finnish education system while remaining disadvantaged by their parents' difficulties in the labour market.

**Keywords**

Children of immigrants • education • Finland • parental resources • gender differences

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## 1 Introduction

In comparison with many of its western neighbours, Finland is a relatively new immigration country. For a variety of reasons, it did not require labour migrants at the time when most other European nations did; by contrast, many Finns emigrated during this period, primarily to Sweden and North America. However, since the 1980s there has been a rapid growth in the foreign-born population and this growth is expected to continue in the foreseeable future.

Immigrants have not found it easy to integrate into the Finnish labour market. Rates of labour force participation are lower than that for Finns and unemployment rates higher, even after taking into account the level of education (Joronen 2007). One of the reasons for this may be difficulties in learning the Finnish language, which is very different to almost all other languages in the world, or problems with the transferability of foreign qualifications and labour market experience. It should also be noted that a large proportion of immigrants in Finland have arrived as refugees, which may mean that their entry into employment can be slower for trauma-related reasons.

For children of immigrants, the first measure of their structural integration into the receiving society is educational achievement. Relatively little is known about children of immigrants in Finland, mainly due to the fact that they have been such a small group until recently. However, there are now numbers large enough to enable meaningful analyses if the right data is used.

Previous international research points to two important conclusions. First, although many ethnic minority groups in Western countries tend to be disadvantaged in terms of school achievement, much – and in some cases all – of this disadvantage may be explained by lower parental resources, such as parental education or social class (e.g. Heath, Rothon & Kilpi 2008: 220–222; Jonsson & Rudolphi 2011: 495–498; Kao & Thompson 2003). Second, there can be a great deal of heterogeneity in achievement between groups of different origin, even after controlling for parental resources (e.g. Glick & Hohmann-Marriott 2007; Jonsson & Rudolphi 2011; Levels & Dronkers 2008; Rothon 2007).

What makes Finland interesting from an international perspective is not only the recentness of its immigration and the large proportion of refugees but also its high-achieving yet equal education system. Successive PISA studies[1] have placed Finland at, or near, the top in terms of achievement in reading, mathematics and science literacy. What is more, these studies have also shown that the effects of socioeconomic background are weaker in Finland than in most other countries (e.g. Marks, Cresswell & Ainley 2006; OECD 2004: 183). Research using PISA data has also suggested that new immigration countries have more difficulties in integrating their migrant populations than old immigrant societies (Levels and Dronkers 2008: 1422–1423; OECD 2006: 37–45). Finland has not been included in these comparisons but as it is a new immigration country, it is important to examine whether it is also experiencing these kinds of difficulties.

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The main immigrant groups – according to country of birth – resident in Finland at the time relevant to this research were from Russia (26 per cent of the foreign-born population in 2004, including those born in the former Soviet Union), Estonia (7 per cent, some Estonians also among those born in the former Soviet Union), Sweden (18 per cent), Somalia (3 per cent) and areas of the former Yugoslavia (4 per cent) (Statistics Finland 2011). As can be seen from this list, the major groups consist of citizens of neighbouring countries on the one hand and refugees on the other. Many immigrants from Russia and Estonia have been entitled to immigrate as descendants of ethnic Finns, mostly Ingrian Finns (for more information, see for example de Tinguy 2003). Most immigrants from Somalia and ex-Yugoslavia have arrived as refugees, asylum seekers or through family reunification. Among the ex-Yugoslavs, the largest ethnic groups are Albanians from Kosovo and Bosniaks, both groups being largely Muslim.

Finland has a nine-year comprehensive school system, after which students apply to upper secondary education. Finnish children start school around the age of seven, and there is no tracking or streaming in comprehensive schools. Education is compulsory until students either complete nine grades or have spent ten years in compulsory education. There is a dual system of education at the upper secondary and tertiary levels. Students apply to upper secondary schools during 9th grade and are admitted largely on the basis of their average grade from the comprehensive-school finishing certificate (*peruskoulun päättötodistus*). Although there are more than enough places to study at upper secondary level for all students to gain a place, entry to each course/school is mainly according to grades.

This article examines the educational performance of children of immigrants in terms of their average grades at the end of compulsory education. The focus is on examining whether differences between children of immigrants and the majority can be explained by parental resources. In addition to this, the question of whether parental resources have the same effect for children of immigrants compared with the majority is studied. The theories behind these research questions are explored in the next section. In line with previous research, the internal heterogeneity within the immigrant-origin population is taken into consideration by differentiating according to national origin. However, due to data restrictions, the groupings used are relatively broad. Therefore, not much emphasis will be placed on these "ethnic" differences.

## 2 Theory

As mentioned above, many ethnic minority groups in Western countries tend to be disadvantaged in terms of school achievement. However, much of this disadvantage is due to the lower socioeconomic positions that immigrant and ethnic minority parents tend to occupy compared with the majority population. It is well-established within sociology of education that family background influences children's educational achievement. The rest of this section discusses the parental resource measures used in this article and the theoretical motivation for using these as controls in the educational performance models. A particular focus is placed on the possibility that the mechanisms may not be the same for children of immigrants as they are for the majority.

### *2.1 Parental education*

One of the main mechanisms through which family background has an effect on school performance is by developing competencies in the child (de Graaf, de Graaf & Kraaykamp 2000; Farkas 1996; Sullivan 2001). Ideally, parental abilities to develop their child's competencies should be measured directly, for example with measures of skills or cultural resources. However, in register data these measures do not exist and the best measure of these abilities is the parents' own educational attainment, supplemented by other measures such as socioeconomic status and income. Equating abilities with educational attainment raises the question of whether education obtained abroad, in other words the education that many immigrant parents are likely to have, is as good a measure of these parental abilities and resources as education in the country of residence (Hustinx 2002: 190–191). If this is not the case, then we would expect a negative interaction between immigrant origin and parental education.

More specifically, there is a difference in the (sociological) meaning of low educational qualifications in a country where education is scarce and sometimes unavailable (such as Somalia) compared with a country such as Finland, where education has been made available to growing sections of the population (Bauer & Riphahn 2007: 125; van de Werfhorst & van Tubergen 2007: 435–436). In other words, in countries without extensive educational provision, even high ability parents are likely to be in the low education groups, again pointing to a negative interaction.

Parental education may also have an effect above and beyond the role it plays as a proxy for general abilities of parents. There may be aspects of parental human capital that help their children succeed in education but that are bound to the country where the parental education has been gained from, for example information about how the education system functions. In this case, a negative interaction is also expected because even a high level of education from another country may not be equal to that gained from the country of residence due to differences in country-specific human capital (Hyvärinen & Erola 2011: 645).

A negative interaction between parental education and immigrant status may also be found because of problems in the register data with regards to education obtained abroad. Education from outside of Finland is not necessarily included in the registers unless a person has registered with the employment authorities, which they are only likely to have done if they have been unemployed. Therefore, a person who has never officially been unemployed in Finland may not have his/her foreign qualifications included in the Finnish registers. Even for those who have registered, their qualifications may not be accurately classified if, either they do not have the necessary documentation to prove their qualifications or the Finnish authorities do not recognise the correct level of the qualification.

### *2.2 Parental income*

Although primary and secondary schooling is free in most (Western) countries, material resources may still matter for the achievement of children in school. Possible reasons for this are that wealthier parents are able to provide their children with better study spaces, more study resources such as reference books and dictionaries, and are more able to use the services of tutors when their children need additional help with their studies.

In the case of immigrant parents, the effect of income may, again, work differently. For example, given that it is likely to be more difficult for immigrants to attain high incomes, a high income may also mean higher unmeasured resources compared with the majority population, and in this way a larger effect of income (Fekjaer 2007: 372). It may also be that immigrants with high incomes are more positively selected amongst immigrants than similarly earning Finnish parents among all Finnish parents, and that this selection is linked to competencies that help their children to achieve highly.

### 2.3 Social class

Parenting style has also been argued to have an effect on educational achievement. Parents from middle class families may 'groom' their children in the skills necessary to do well in school, and in life more generally (Lareau 2003). This may be one of the reasons why middle class children do better in school.

However, it is possible that immigrant parents have parenting styles different to those of the native population. If immigration is seen as a family mobilisation project, immigrant parents, whatever their class position, may monitor their children, back them up with their school work, and involve themselves with the school to an extent that may be more typical to the middle class than to the working class. This could lead to social class effects being smaller for immigrants than for the native population.

On the other hand, this effect may be dampened by a lack of know-how that immigrant parents may suffer from. In fact, both international and Finnish research suggests that immigrant parents do not tend to be actively in contact with their children's schools (Heckmann 2008: 53; Kuusela *et al*. 2008: 87–88). If low status immigrant parents are even less likely to engage with their child's schooling than majority parents of the same status, then we could see social class having a larger effect on the educational achievement of children of immigrants.

### 2.4 Gender

Gender differences in school performance appear to be prevalent across the Western world, with women having overtaken men on a variety of measures including test scores and grades, although the differences are often not as large in the former as the latter. The same pattern is mirrored in Finland. Moreover, there is evidence that the higher achievement of girl students is also largely the case among ethnic minorities in Western Europe and the United States (reviewed in Heath, Rothon & Kilpi [2008: 217] for Western Europe and Suarez-Orozco & Qin [2005] for the USA)

One explanation put forward for the higher performance of ethnic minority girls compared with boys is a combination of two contradictory trends (Alitolppa-Niitamo 2004; Zhou & Bankston 2001). On the one hand, parents are likely to control their daughters to a greater extent than their sons. This means that girls spend more time at home and thus potentially more time on their homework. On the other hand, immigrant parents also increasingly recognise the value of formal education for their daughters. The first of these trends shows a traditional view of female roles, whereas the second is indicative of a modernisation of views amongst parents. Together they combine to give ethnic minority girls an advantage over their male peers. Moreover, compared with the majority population, these trends may lead to an interaction between gender and ethnicity, whereby the potential ethnic disadvantages are concentrated among, or even limited to, the ethnic minority boys.

On the other hand, gender differences disadvantaging women in many parental countries of origin may translate into disadvantage for daughters of immigrants when there is same-sex socialisation taking place. The same-sex socialisation hypothesis assumes that daughters are more influenced by their mother's education or socioeconomic status whereas sons are more influenced by their father's. Cross-national evidence for this model is patchy but certainly exists for some countries (Marks 2008). Moreover, evidence suggests that this is the case among children of immigrants in Canada (Abada & Tenkorang 2009), though not necessarily in Norway, where minority girls tend to be more affected by both their mother and father than minority boys (Støren & Helland 2010). Related to this is the importance of the presence of either or both parents in the family. Feliciano & Rumbaut (2005) suggest that daughters of immigrants may benefit educationally more than sons from living with two parents. By contrast, Buchmann & DiPrete (2006) have found that American boys are disproportionately being disadvantaged in their educational attainment by absent fathers. There may, therefore, be ethnic-specific differences in the effect of family composition.

## 3 Data

The data used in this article comes from registers kept by Statistics Finland, the national office of statistics. The population for the purposes of this data is all individuals who finished compulsory education in the period 2000–2004 and who were residents in Finland in 2004. A sample from this population was chosen on the basis of registered language so that 50 per cent of those registered as foreign-language speakers were included in the sample, as well as 30 per cent of Swedish speakers and 5 per cent of Finnish speakers.

National origin is defined on the basis of parental country of birth. Countries of birth have been grouped together and this was partly done by Statistics Finland (for reasons of anonymity) and partly by the author. The national origin groupings used, their size and the largest countries of origin within groupings are shown in table 1.

The second generation is defined as children born to two foreign-born parents who were themselves either born in Finland or had lived in Finland for over nine years prior to finishing comprehensive school. In other words, they should have migrated to Finland before the beginning of compulsory education. By contrast, the first generation are the students who have foreign-born parents, were themselves born abroad, and had migrated to Finland less than nine years prior to finishing comprehensive school. The proportion of students of each generation within the immigrant-origin groups is also shown in table 1. Children with one foreign-born and one Finnish-born parent are analysed as a separate mixed-origin group.

### 3.1 Dependent variable

The measure of school achievement used here is the average grade in the comprehensive-school finishing certificate. Grades are given in each subject from 4 (unsatisfactory performance) to 10 (excellent performance). The mean average grade in this sample is 7.8.

*Table 1. National origin groups and largest countries of origin within groups (estimated to be at least 15% of a group), sample size and proportion in the population of comprehensive-school leavers, division into two generations for immigrant-origin groups*

| | Sample (N) | % of population | % 2nd generation | % 1st generation |
|---|---|---|---|---|
| Finnish | 18,811 | 96.5 | | |
| Mixed (one Finnish-born parent) | 561 | 1.5 | | |
| Former Soviet Union – FSU/Russia, Estonia | 1,682 | 1.2 | 34.1 | 65.9 |
| Former Yugoslavia | 253 | 0.2 | 29.6 | 70.4 |
| Europe, America and Oceania – Sweden | 104 | 0.1 | 53.9 | 46.1 |
| West Asia and North Africa – Iraq, Turkey, Iran | 364 | 0.2 | 30.4 | 69.6 |
| Other Asia – Vietnam, China | 320 | 0.2 | 55.7 | 44.3 |
| Sub-Saharan Africa – Somalia | 313 | 0.2 | 31.3 | 68.7 |
| Total | 22,408 | 100 | | |

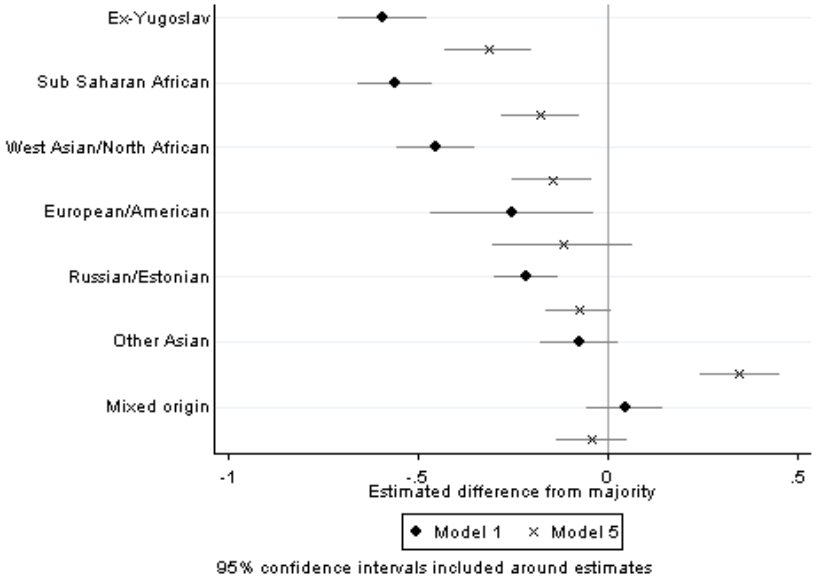


*Figure 1. Estimated difference in average grades at the end of 9th grade from majority by national-origin group (2nd generation) in model with no controls (Model 1) and model with all controls (Model 5)*

For anonymity reasons, the very top and very bottom grades have been collapsed in the data, thus the range of grades is from 6 to 9.5. Grades are teacher-assigned and are based on examinations set by the teacher and teacher evaluations of classroom activity. There are national guidelines for each grade but teachers are not monitored as to how well they follow these guidelines. Overall, repeated evaluations by the National Board of Education have shown that there exists a strong and consistent link between teacher-assigned grades and standardised tests.[2]

### 3.2 Independent variables: family resources

The measures of family resources used in this article are parental education, parental labour force participation, parental income, parental socioeconomic status, and household composition. Table 2 lists the categories within each of these variables and their distribution within the majority, the second and the first generation. All other independent variables come from the year when the student finished comprehensive school except for parental socioeconomic status. This is from the year 2000 for all students as this data is produced by Statistics Finland less frequently. For all measures that have been combined or collapsed from separate or more detailed information, alternative specifications were also tested but the ones used here were found to be the most suitable in terms of explanatory power and parsimony.

For people with foreign qualifications, data on education may be completely missing or incorrectly classified. Based on survey data from the Russian, Estonian, Somalian and Vietnamese populations in Finland (Liebkind *et al.* 2004: 311; Pohjanpää, Paananen & Nieminen 2003), the proportion of people with upper secondary and lowest tertiary level education is possibly underestimated here, and

*Table 2. Descriptive statistics and categories of independent variables measuring family resources.*

| | % within majority | % within 2nd generation | % within 1st generation |
|---|---|---|---|
| Parental education | | | |
| Both parents with university | 7.2 | 6.7 | 3.9 |
| One parent with university or both parents with general upper secondary or lowest level tertiary education | 22.5 | 17.2 | 20.3 |
| One parent with general upper secondary or lowest tertiary | 21.9 | 12.9 | 12.0 |
| Vocational secondary education | 39.7 | 30.8 | 25.4 |
| Lower secondary education | 8.6 | 31.2 | 35.2 |
| Unknown education | 0.1 | 1.2 | 3.2 |
| Parental socioeconomic status | | | |
| Upper employees (senior officials and employees, upper management) | 25.3 | 13.5 | 7.0 |
| Lower employees (supervisors, clerical and sales workers) | 37.0 | 16.4 | 11.2 |
| Self-employed, including farmers | 11.9 | 7.1 | 5.4 |
| Manual workers | 19.5 | 26.6 | 17.8 |
| Outside labour force/unknown, including students and pensioners | 6.3 | 36.4 | 58.6 |
| Family composition | | | |
| Two adults | 79.0 | 67.9 | 66.5 |
| One or fewer adults | 21.0 | 32.1 | 33.5 |
| Parental income | | | |
| High (At least one parent earns in the highest quartile, or both parents earn in the third quartile) | 49.8 | 14.4 | 5.0 |
| Medium (At most one parent earns in the third quartile, or both parents earn in the second quartile) | 30.9 | 24.8 | 13.7 |
| Low (At most one parent earns in the second quartile, or both earn less, or both unknown) | 19.3 | 60.8 | 81.3 |
| Father's labour force status | | | |
| Employed | 79.7 | 44.3 | 29.2 |
| Unemployed | 7.2 | 19.9 | 18.0 |
| Outside labour force/unknown | 13.1 | 35.8 | 52.8 |
| Mother's labour force status | | | |
| Employed | 81.2 | 48.3 | 35.3 |
| Unemployed | 8.8 | 26.9 | 29.9 |
| Outside labour force/unknown | 10.0 | 24.8 | 34.8 |
| N | 18,811 | 1,021 | 2,015 |

in some groups the proportion with a university degree. In order to alleviate part of the problem of missing data, parents with unknown education but with information on socioeconomic status have had their education replaced with the mode or mean level of education of others with the same socioeconomic status.[3]

As a final note, all of the information about parents relates to the student's biological parents, or adopted parents when information about biological parents is not available. Therefore, the information does not necessarily relate to the adults that the student lives with. Related to this, there may be information about both parents even when the student only lives with one. Only the information about household composition is specifically about the people that the student lives with.

## 4 Results

The raw differences in average grades between national-origin groupings and the majority, only controlling for gender and generation, can be seen in model 1, shown in table 3 and figure 1. Most groups have average grades that are approximately half a grade lower than those of the majority. This is also the gender difference in favour of girls. On the other hand, the difference is only approximately a quarter of a grade for the Russian/Estonian group and the European/American one, whereas the mixed and other Asian groups do not differ in their average grades from the majority.

*Table 3. Ordinary least-square regression models of average grades (coefficients above, robust standard errors below).*

| | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 |
|---|---|---|---|---|---|
| National origin (Finnish as reference) | | | | | |
| Mixed origin (one Finnish-born parent) | 0.04 | -0.06 | -0.06 | -0.05 | -0.04 |
| | (0.05) | (0.05) | (0.05) | (0.05) | (0.05) |
| Russian/Estonian | -0.21*** | -0.19*** | -0.11** | -0.10** | -0.08* |
| | (0.04) | (0.05) | (0.05) | (0.04) | (0.04) |
| Ex-Yugoslav | -0.59*** | -0.43*** | -0.30*** | -0.34*** | -0.31*** |
| | (0.06) | (0.06) | (0.06) | (0.06) | (0.06) |
| European/American | -0.25** | -0.21** | -0.15 | -0.13 | -0.12 |
| | (0.11) | (0.10) | (0.10) | (0.09) | (0.09) |
| West Asian/North African | -0.45*** | -0.24*** | -0.15*** | -0.17*** | -0.15*** |
| | (0.05) | (0.05) | (0.05) | (0.05) | (0.05) |
| Other Asian | -0.07 | 0.27*** | 0.33*** | 0.32*** | 0.35*** |
| | (0.05) | (0.05) | (0.05) | (0.05) | (0.05) |
| Sub Saharan African | -0.56*** | -0.31*** | -0.20*** | -0.19*** | -0.18*** |
| | (0.05) | (0.05) | (0.05) | (0.05) | (0.05) |
| Gender (male as reference) | | | | | |
| Female | 0.57*** | 0.57*** | 0.57*** | 0.57*** | 0.58*** |
| | (0.01) | (0.01) | (0.01) | (0.01) | (0.01) |
| Generation (2nd and above as reference) | | | | | |
| 1st generation | -0.11*** | -0.06 | -0.02 | -0.03 | -0.03 |
| | (0.04) | (0.04) | (0.04) | (0.04) | (0.04) |
| Parental education (both parents with university as reference) | | | | | |
| One parent with university or both general secondary/low tertiary | | -0.36*** | -0.32*** | -0.31*** | -0.30*** |
| | | (0.02) | (0.02) | (0.02) | (0.02) |
| One general secondary/low tertiary | | -0.67*** | -0.56*** | -0.55*** | -0.53*** |
| | | (0.02) | (0.03) | (0.03) | (0.03) |
| Vocational | | -0.98*** | -0.80*** | -0.78*** | -0.75*** |
| | | (0.02) | (0.03) | (0.03) | (0.03) |

*Continued* *Table 3. Ordinary least-square regression models of average grades (coefficients above, robust standard errors below).*

| | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 |
|---|---|---|---|---|---|
| Lower secondary | | -1.24*** | -1.03*** | -1.00*** | -0.96*** |
| | | (0.03) | (0.03) | (0.03) | (0.03) |
| Unknown | | -1.17*** | -0.85*** | -0.73*** | -0.69*** |
| | | (0.13) | (0.13) | (0.13) | (0.13) |
| Parental socioeconomic status (upper employees as reference) | | | | | |
| Lower employees | | | -0.12*** | -0.12*** | -0.10*** |
| | | | (0.02) | (0.02) | (0.02) |
| Self-employed | | | -0.08*** | -0.09*** | -0.06** |
| | | | (0.03) | (0.03) | (0.03) |
| Manual workers | | | -0.31*** | -0.29*** | -0.26*** |
| | | | (0.02) | (0.02) | (0.02) |
| Outside labour force/ unknown | | | -0.37*** | -0.32*** | -0.24*** |
| | | | (0.03) | (0.03) | (0.03) |
| Family composition (two adults in household as reference) | | | | | |
| One or fewer adults | | | | -0.20*** | -0.18*** |
| | | | | (0.02) | (0.02) |
| Parental income (high income as reference) | | | | | |
| Medium income | | | | | -0.07*** |
| | | | | | (0.02) |
| Low income | | | | | -0.13*** |
| | | | | | (0.02) |
| Constant | 7.51*** | 8.23*** | 8.24*** | 8.26*** | 8.27*** |
| | (0.01) | (0.02) | (0.02) | (0.02) | (0.02) |
| Log likelihood | -28508 | -26592 | -26416 | -26305 | -26274 |
| R-squared | 0.10 | 0.24 | 0.25 | 0.26 | 0.26 |
| N = 22,408 in all models, *** p<0.01, ** p<0.05, * p<0.1 | | | | | |

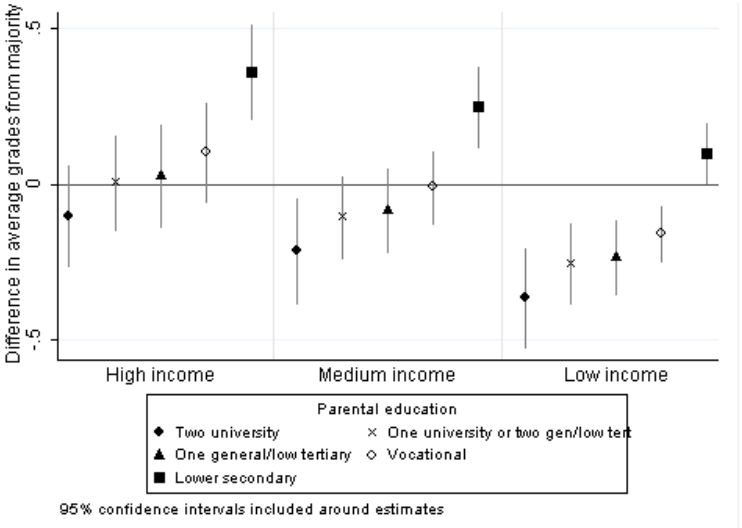


*Figure 2. Interactions of parental education and income with immigrant-origin: estimated difference in average grades of children of immigrants from majority by different combinations of parental education and income.*

In further models, the parental resource variables are added one by one: in model 2 parental education is added, in model 3 parental socioeconomic status, in model 4 number of adults in the household, and in model 5 parental income. The ordering is determined by improvements in model fit. Adding parental labour force status does not improve model fit further, and except for the ex-Yugoslav group, does not change the national-origin estimates, and so is not included in the final models. The estimates from models 2–5 can be seen in table 3 and the national-origin estimates from model 5 in figure 1.

The negative national-origin estimates tend to decrease across the models, mostly being reduced to between a third and half their original size. The estimate for the mixed-origin group does not change much and remains insignificant, whereas that for the other Asian group becomes significant and positive. The largest disadvantage remains for the ex-Yugoslav group at a third of a grade. Although there is a small but significant additional disadvantage for the first generation in model 1, after controls for parental resources, this disadvantage disappears.

It may also be noted that the total explanatory power of the models is rather modest: even in model 5, the total $R^2$ is only 0.26, in other words only 26 per cent of the variance in average grades is explained by the variables in the model. This is not a very large proportion, particularly given that this includes four (well-measured) parental resource variables and gender as well as national origin. However, it does suggest that, as has already been evident in earlier research, family background has a rather small effect on educational outcomes in Finland.

### *4.1 Immigrant-origin interactions with family resources*

In order to examine immigrant-origin interactions with family resources, only one set of interactions for all those of immigrant origin (excluding mixed) is used. Subgroups, such as differentiation between the two generations or between disadvantaged and advantaged groups, were also tested, but these groups were not found to differ significantly from each other. Interactions with all the family resource variables used in the models were tested but only those with parental education and income were found to be significant. The results of the model that includes these two interactions can be seen in model 6, table 4.

The two interactions go in opposite directions: among children of immigrants parental education has a smaller effect than among the majority, whereas parental income has a larger effect. In particular, the difference in educational attainment between children whose parents have only lower secondary education and those whose parents have more education is smaller for children of immigrants than for the majority. For example, children of immigrant parents with at most lower secondary education differ from the most highly educated group by approximately half a grade compared with the whole grade among the majority, and their difference from the vocationally educated is nonexistent, whereas it is a fifth of a grade among the majority. On the other hand, the difference between the highest and the lowest income group is only just over a tenth of a grade for the majority whereas it is approximately a third of a grade for children of immigrants.

The joint effect of these two interactions can be seen in figure 2. This shows estimated differences in average grades for children of immigrants compared with the majority for each combination of parental education and income. Overall, this figure shows that among the high and medium income groups, children of immigrants do not differ significantly from their majority peers. The only exceptions to this are children with high income but only lower-secondary-educated parents and those with medium income and university-educated parents. Among the first group, children of immigrants are advantaged, but this is an unusual combination of parental characteristics (under 2 per cent of children of immigrants). Among the latter group, children of immigrants are slightly disadvantaged, but again this is a very unusual combination of parental characteristics (1 per cent of children of immigrants). In the low income group, children of immigrants tend to be disadvantaged compared with the majority with the exception of those with lower-secondary-educated parents.

Overall, the interactions with parental education and income tend to cancel each other out: at the extremes, children of immigrants do not differ significantly from the majority. This would point to issues with measurement; if parental education does not work as well as a

*Table 4. Ordinary least-square regression models of average grades including interactions (coefficients above, robust standard errors below).*

| | Model 6 | | Model 7 | | Model 8 | |
|---|---|---|---|---|---|---|
| | main effects | interactions | main effects | interactions | main effects | interactions |
| National origin (Finnish as reference) | | | | | | |
| | | | | *female | | *female |
| Mixed origin (one Finnish-born parent) | -0.04 | | -0.04 | -0.01 | -0.04 | -0.01 |
| | (0.05) | | (0.07) | (0.09) | (0.07) | (0.09) |
| Russian/Estonian | -0.11 | | -0.12 | 0.05 | -0.13 | 0.05 |
| | (0.08) | | (0.09) | (0.05) | (0.09) | (0.05) |
| Ex-Yugoslav | -0.36*** | | -0.26** | -0.19* | -0.26** | 0.00 |
| | (0.10) | | (0.10) | (0.10) | (0.10) | (0.13) |
| European/American | -0.17 | | -0.04 | -0.24 | -0.05 | -0.24 |
| | (0.11) | | (0.14) | (0.16) | (0.14) | (0.16) |
| West Asian/North African | -0.23** | | -0.04 | -0.41*** | -0.04 | -0.19 |
| | (0.09) | | (0.10) | (0.08) | (0.10) | (0.12) |
| Other Asian | 0.21** | | 0.33*** | -0.23** | 0.33*** | -0.24** |
| | (0.10) | | (0.10) | (0.10) | (0.11) | (0.10) |
| Sub Saharan African | -0.26*** | | -0.05 | -0.45*** | -0.06 | -0.22* |
| | (0.09) | | (0.10) | (0.07) | (0.10) | (0.12) |
| Gender (male as reference) | | | | | | |
| Female | 0.58*** | | 0.58*** | | 0.58*** | |
| | (0.01) | | (0.01) | | (0.01) | |
| Generation (2nd and above as reference) | | | | | | |
| 1st generation | -0.02 | | -0.02 | | -0.02 | |
| | (0.04) | | (0.04) | | (0.04) | |
| Parental education (both parents with university as reference) | | | | | | |
| | | *immigrant-origin | | *immigrant-origin | | *immigrant-origin |
| One parent with university or both general secondary/low tertiary | -0.30*** | 0.09 | -0.30*** | 0.09 | -0.30*** | 0.09 |
| | (0.02) | (0.08) | (0.02) | (0.08) | (0.02) | (0.08) |
| One general secondary/low tertiary | -0.53*** | 0.13 | -0.53*** | 0.12 | -0.53*** | 0.12 |
| | (0.03) | (0.09) | (0.03) | (0.09) | (0.03) | (0.09) |
| Vocational | -0.76*** | 0.19** | -0.76*** | 0.19** | -0.76*** | 0.19** |
| | (0.03) | (0.08) | (0.03) | (0.08) | (0.03) | (0.08) |
| Lower secondary | -0.98*** | 0.42*** | -0.98*** | 0.42*** | -0.98*** | 0.42*** |
| | (0.03) | (0.08) | (0.04) | (0.08) | (0.03) | (0.08) |
| Unknown | -0.76*** | 0.45** | -0.76*** | 0.42* | -0.80*** | 0.44** |
| | (0.18) | (0.22) | (0.18) | (0.21) | (0.18) | (0.22) |
| Parental socioeconomic status (upper employees as reference) | | | | | | |
| Lower employees | -0.10*** | | -0.10*** | | -0.10*** | |
| | (0.02) | | (0.02) | | (0.02) | |
| Self-employed | -0.06** | | -0.06** | | -0.06** | |
| | (0.03) | | (0.03) | | (0.03) | |

*Continued* *Table 4. Ordinary least-square regression models of average grades including interactions (coefficients above, robust standard errors below).*

| | Model 6 | | Model 7 | | Model 8 | |
|---|---|---|---|---|---|---|
| | main effects | interactions | main effects | interactions | main effects | interactions |
| Manual workers | -0.26*** | | -0.26*** | | -0.25*** | |
| | (0.02) | | (0.02) | | (0.03) | |
| Outside labour force/unknown | -0.24*** | | -0.24*** | | -0.23*** | |
| | (0.03) | | (0.03) | | (0.03) | |
| Family composition (two adults in household as reference) | | | | | | |
| One or fewer adults | -0.18*** | | -0.18*** | | -0.18*** | |
| | (0.02) | | (0.02) | | (0.02) | |
| Parental income (high income as reference) | | | | | | |
| | | *immigrant-origin | | *immigrant-origin | | *immigrant-origin |
| Medium income | -0.07*** | -0.10 | -0.07*** | -0.11 | -0.07*** | -0.11 |
| | (0.02) | (0.08) | (0.02) | (0.08) | (0.02) | (0.08) |
| Low income | -0.12*** | -0.23*** | -0.12*** | -0.24*** | -0.12*** | -0.23*** |
| | (0.02) | (0.07) | (0.02) | (0.07) | (0.02) | (0.07) |
| Mother's labour force status (employed as reference) | | | | | | |
| | | | | | | *female*ex-Yugoslav/ West Asian/North African/ Sub-Saharan African |
| Unemployed | | | | | -0.07*** | -0.18 |
| | | | | | (0.02) | (0.11) |
| Outside labour force/unknown | | | | | 0.02 | -0.32*** |
| | | | | | (0.02) | (0.11) |
| Constant | 8.27*** | | 8.27*** | | 8.27*** | |
| | (0.02) | | (0.02) | | (0.02) | |
| Log likelihood | -26267 | | -26262 | | -26252 | |
| R-squared | 0.26 | | 0.26 | | 0.26 | |
| N = 22,408 in all models, *** p<0.01, ** p<0.05, * p<0.1 | | | | | | |

measure of parental capabilities for immigrant parents as it does for the majority, then another measure is likely to take the role of that underlying variable. In this case, the work is being done by parental income. However, additional analyses suggest that problems of measurement are not necessarily the cause. Two possible reasons put forward for problems of measurement were that there are issues related to the registration of education from abroad in Finland or because education from some countries of origin does not reflect parental abilities and education from Finland (or other Western countries). In either case we would expect the problem to only be present, or at least to be larger, for non-European groups compared with European groups. Yet this is not the case and the interactions are present and similar in size for Europeans and non-Europeans alike.

Moreover, it should be noted that a significant proportion of children of immigrants are disadvantaged by having highly educated parents who are nevertheless stuck in the low income group (43 per cent of children of immigrants). This could point to explanations relating to parental stress and lack of language fluency that come from downward mobility and low levels of social integration of the parents. The possible reasons for these interactions will be returned to in the discussion.

### *4.2 Gender*

The possibility that the effect of gender may not be the same for all ethnic groups is explored with gender interaction terms introduced into the model from the previous section. The results can be seen in model 7, table 4. Significant (p<0.10) and negative interactions were found for the ex-Yugoslav, West Asian/North African, other Asian and Sub Saharan African groups. The European/American

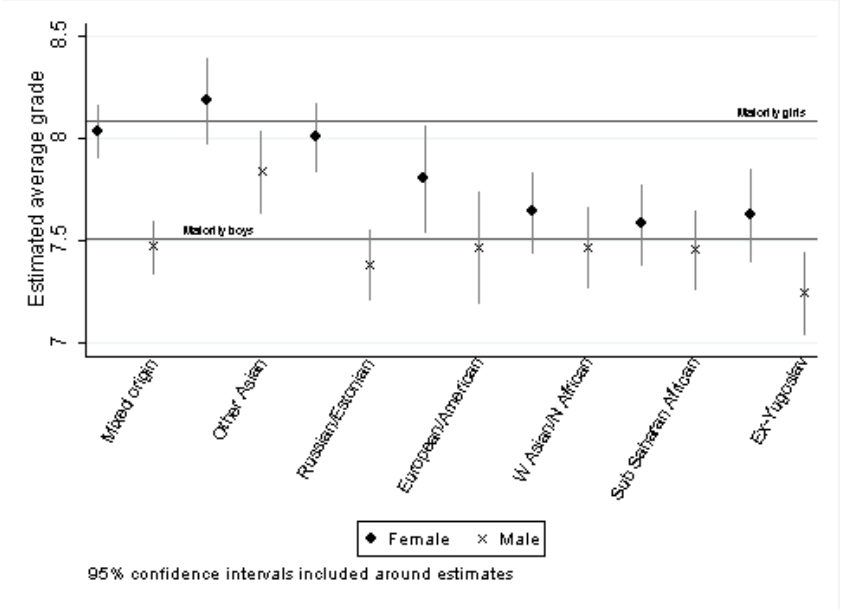


*Figure 3. Interaction of gender and national-origin groups: estimated average grades by national origin and gender (baseline: average grades of majority boys).*

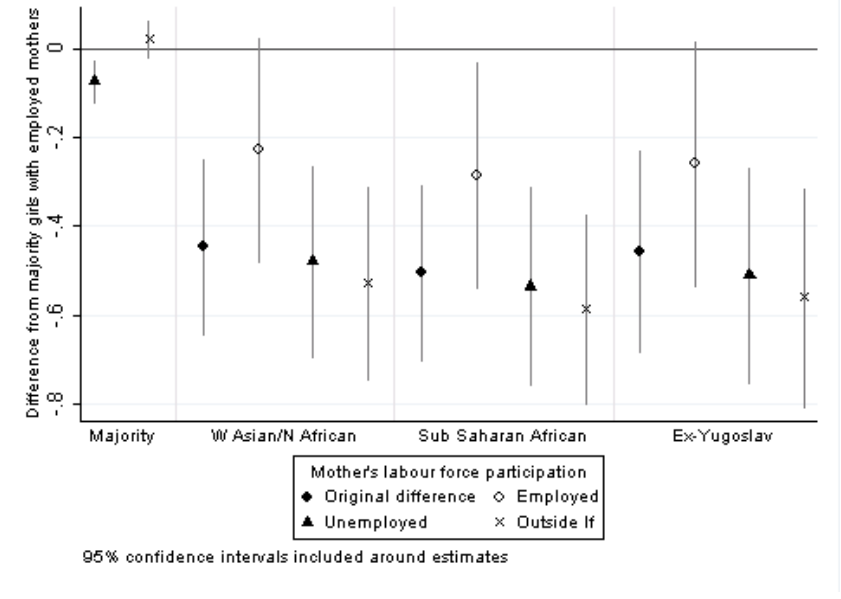


*Figure 4. Interactions of gender, national-origin groups and mother's labour force participation: estimated difference in average grades for girls by national origin and mother's labour force participation from majority girls with employed mothers.*

group was also found to have an interaction in the same region of magnitude as these groups, but due to the small size of the group, the interaction is not significant. The effect of these interactions can be seen in figure 3.

In all groups, girls do better than their male counterparts. However, the difference between male and female students is rather small (and insignificant in most cases) for most groups, excluding those of mixed and Russian/Estonian origins as well as the majority Finns. Moreover, this figure shows that only one male minority group performs worse than majority males, whereas several female groups perform worse than majority females. Overall, many of the disadvantages seen in the previous models tend to be due to the lower than expected achievement levels of females.

An attempt was then made to explain some of these female disadvantages (relative to majority females) with differential effects of parental characteristics. In line with previous research, differential effects of maternal and paternal characteristics as well as family composition were explored. However, none of these were significant, and in particular, many of the same-sex socialisation hypotheses were not supported. The explanatory variable that was found to be significant and able to explain part of the disadvantage

was mother's labour force participation. The results of the model that includes this variable as well as a three-way interaction with gender and a combination of the ex-Yugoslav, West Asian/North African and Sub-Saharan African groups can be seen in model 8, table 4. The effect of mother's labour force status on the school achievement of girls from these groups can be seen in figure 4.

The results of this model suggest that mother's unemployment affects students negatively compared with mother's employment or mother being outside the labour force or unknown. However, for girls with origins in the former Yugoslavia, West Asia/North Africa and Sub-Saharan Africa, a mother being outside the labour force or unknown has a significant negative impact. Moreover, mother's unemployment possibly has a larger effect, although this interaction is not significant. The figure clearly shows how the disadvantage in these groups is concentrated among the girls whose mothers are either unemployed or outside the labour force. By contrast, the girls whose mothers are employed have higher achievement levels, although even here the achievement level is slightly below that of the majority girls.

## 5 Discussion and conclusion

Children of immigrants in Finland tend to have lower levels of school achievement at the end of comprehensive school than the majority. However, this article has shown that to a large extent this can be explained by their lower parental resources. This is the case despite the findings that parental resources have a relatively small explanatory role overall in Finland and that parental education and income have somewhat different effects among children of immigrants as compared with the majority. However, even after these controls, most immigrant-origin groups were found to be slightly disadvantaged compared with the majority. The exception to this is the Asian group, which outperforms the majority, in line with results from many other countries. Children of one Finnish-born and one foreign-born parent do not differ from the majority in any of the models considered here and the Russian/Estonian group does relatively well too. Part of the advantage of the latter group may be due to language similarities between Finnish and Estonian; unfortunately it is not possible in this research to separate these two groups in order to examine this explanation further. Groups with large proportions of refugees tend to have the lowest levels of achievement overall, which may possibly be due to lingering effects of trauma.

It should be noted that compared with some of the differences within the majority population, most differences between national groupings are rather small. The national-origin coefficients that remained negative are approximately similar in size to the difference between two adjacent parental education categories. The gender difference is much larger than any national-origin difference. The relative size of the national-origin coefficients compared with other controls reflects findings in other European countries (e.g. compared with English results from Rothon 2007). In Sweden, fewer groups tend to remain disadvantaged compared with the majority after controls similar to the ones here, and the remaining disadvantages tend to be somewhat smaller in comparison with the size of the controls (Jonsson & Rudolphi 2011). Moreover, the groups that are disadvantaged in Sweden (mostly Nordic and South American) are somewhat different to those in Finland, which is likely to reflect the different migration histories of Finland and Sweden and thus the different composition of the immigrant population – even when they are from similar national origins.

The difference between the first and the second generations was found to be small but significant in the model without controls for parental resources, indicating a slightly lower achievement level of immigrant students who arrive during their school years compared with other students. However, this difference disappeared after parental resource controls were introduced. The lack of a difference may be seen as surprising given the fact that most immigrants will have no prior knowledge of Finnish when they arrive. However, one explanation for this may be Finnish grading practices that take into account language development.[4] In fact, differences in grades between foreign-language speakers and the majority are rather smaller in languages (especially Finnish) than in history, biology and geography (Kuusela *et al.* 2008: 143–144). It can be assumed that language teachers are rather more adept at recognising language development than teachers whose subjects also require developed language proficiency. Additional support for this interpretation of adaptive grading practices comes from the finding that the grades of immigrants tend to be slightly higher than the grades of majority students with similar test performance (Kuusela *et al.* 2008: 124–125), as performance in standardised tests is likely to be more affected by language skills. This may have implications for the further educational trajectories of children of immigrants: grades are the main determining factor for continuation into upper secondary education and children of immigrants have been found to have higher continuation propensities into the more academically demanding general upper secondary schools than their peers with similar grades and parental resources (Kilpi-Jakonen 2011). If teachers in comprehensive schools have overestimated the achievements of their immigrant-origin pupils then this may make successful completion of upper secondary more difficult for them than anticipated.

The effects of parental education and income were found to be different for children of immigrants compared with the majority. In the case of parental education, differences among children of immigrants are not as large as they are within the majority. The opposite is the case for parental income. These two trends combine to produce average grades that are roughly equal at the extremes. One possible explanation is that there are problems of measurement in the parental education variable that produce these interactions. However, this was not supported by further analyses. Therefore, there is likely to be something more behind these interactions, particularly given that there is large proportion of children of immigrants whose parents have relatively high education levels but low incomes and who were found to be disadvantaged compared with the majority. A combination of high education and low income is likely to be related to downward mobility for the immigrant parents. If status inconsistency increases parental stress, this may reduce their ability to assist and motivate their children in their school work even if they would otherwise have the ability to do so (see Zhang [2008] for a recent discussion of the old idea of status inconsistency leading to stress). On the other hand, this combination of parental characteristics may also be an indication of a lack of social integration, which may also lead to stress (Dalgard & Thapa 2007), but it can also be related to low levels of language fluency for the parents, thus restricting their ability to help their children. Parental stress and lack of social integration may also affect the children's motivation to succeed in school directly.

A smaller effect of parental education has also been found in other European studies, though these studies have looked at different stages of the educational career (Bauer & Riphahn 2007; Fekjaer 2007; Støren & Helland 2010). However, these studies have either not looked at or have not found larger effects of parental income. Another study from Finland has examined the effect of family background on final educational attainment among earlier cohorts using sibling correlations and found that although the total effect of family background was somewhat larger among the second generation – most of whom were of mixed origin – the effect of parental education was smaller compared with the majority (Hyvärinen & Erola 2011). Based on Finnish evidence, it would seem that parental education cannot simply be equated with parental abilities to develop competencies in the child. For immigrant parents, a great deal seems to depend on how their abilities and resources are used in the country of residence and whether they can obtain new skills and resources that can help their children. In other words, there seems to be a country-specific component to parental human capital.

The large gender difference in favour of girls within the majority is not replicated among all minority groups. Except for the mixed and Russian/Estonian origin groups, large (though not always significant) negative gender interactions were found, although none were larger than the positive main effect of gender. Nevertheless, after the introduction of gender*national-origin interactions, sons of immigrants were no longer found to be disadvantaged compared with majority boys, with the exception of the ex-Yugoslav group. On the other hand, daughters of immigrants born in ex-Yugoslavia, West Asia/North Africa and Sub-Saharan Africa were found to be disadvantaged compared with majority girls.

This can partly be explained by maternal employment patterns and the particularly large negative effect of having a mother outside the labour force for girls in these groups. Støren & Helland (2010) also found maternal employment to have a particularly large effect for minority girls in Norway, even though their results relate to completion of upper secondary education. However, they found minority girls to have a larger gender advantage than majority girls, which is in contrast to the findings here.

It may be hypothesised that the groups in which maternal (non-)employment is particularly important are largely composed of immigrants from areas where female education has not been widespread. Therefore, these families may have a lingering scepticism about the value of education for their daughters, which may cause the girls to not perform as well as they could in school. This may be linked to more domestic chores for girls in this group compared with girls in other groups, which may hinder their school work. It is also possible that if girls from these groups are more constrained to their own homes, their ability to interact with Finnish speakers, and thus develop their linguistic competencies, is more restricted, leading to lower school achievement.

On the other hand, within these groups, the families where mothers are employed are likely to show greater modernisation attitudes. This may translate directly into a family culture that values girls' education, thus enhancing educational performance. It may also mean a greater willingness to allow contacts with Finnish speakers. Within the framework of the same-sex socialisation model, we can also assume that an employed mother provides a better role model for girls in these groups where female education and employment may not necessarily be highly valued.

The gender difference has also been found to be smaller among earlier second generation cohorts compared with the majority in Finland (Hyvärinen & Erola 2011). Interestingly, these earlier cohorts tend to be mostly of mixed origin and in this study there was no gender interaction for those of mixed origin. Overall, it is possible that the mechanisms that have led to the growth of a female advantage in education take a certain amount of time to become widespread among the population of immigrant-origin. These mechanisms are likely to be linked to the growth of female labour force participation.

In conclusion, one of the main dividing lines in Finnish comprehensive schools tends to be between majority girls (as well as some minority girls) and the rest (majority and minority boys as well as many minority girls). However, the lower achievement levels of children of immigrants should not be overlooked: given the low social status of immigrant parents, the disadvantages faced by children of immigrants are cumulative, and most children of immigrants are not overcoming their low social origins. As can be seen from table 2, the proportion of immigrant parents who are outside the labour force and on low incomes is remarkably high: for example, over 60 per cent of second generation pupils live in families with low incomes. One could expect Finland to be a prime location for children of immigrants to achieve highly due to the relatively low influence of parental resources on achievement and the grading practices that take language development into consideration. However, only the Asian and mixed origin groups are able to attain average grades that are comparable with those of the majority when parental characteristics are not taken into consideration. Finnish educational equality largely extends to children of immigrants – but a shadow is cast by the labour market situation of their parents.

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## Notes

1. PISA stands for the Programme of International Student Assessment, which is run by the Organisation for Economic Co-operation and Development and has tested the skills of 15-year-olds in a large number of countries in 2000, 2003, 2006 and 2009.
2. The models reported in this article were also run as multilevel models where individuals are nested in schools. This check was done in case children of immigrants were located in schools where all students are consistently under- or over-evaluated, which would influence the difference between children of immigrants and the majority as a whole. The results of the multilevel models were similar to the single-level models and therefore single-level models are presented here. Multilevel results available from the author on request.
3. Either the mode or the mean is used, depending on which was judged to be more appropriate. A total of 83 replacements were made to father's education and 25 to mother's education. However, this changed the combined category of only 52 families.
4. As stated in the National Core Curriculum: "Assessment of immigrant pupils in the different subjects takes account of the pupil's background and gradually improving skill in Finnish or Swedish. The assessment of the pupil is to use diversified, flexible assessment methods that are adapted to the pupil's situation, so that he or she is able to demonstrate his or her performance regardless of possible deficiencies in Finnish- or Swedish-language skills." (Finnish National Board of Education 2004: 263).

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