Converting ambitions into choices: Are the educational expectations of immigrants less predictive of attainment than those of natives?

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Abstract

Educational expectations have long been known to be an important predictor of educational outcomes. In Western countries, immigrants and their children tend to hold higher educational expectations than natives, which often results in ambitious educational choices. In the literature, the immigrant advantage in educational expectations is mostly attributed to positive self-selection of immigrants on traits such as optimism. However, this optimism could also mask information biases. In particular, immigrant parents may have less information than native ones assess their children's educational perspectives, and hence their educational expectations for them might be weaker predictors of attainment. In this paper, I use data from the Swedish sub-sample of the Children of Immigrants Longitudinal Survey in Four European Countries (CILS4EU) to test the hypothesis that the relationship between parental educational expectations and educational attainment is weaker for migrants than for natives due to the role of information asymmetries. In contrast, I anticipate that no such difference exist when assessing the role of children's own educational expectation on attainment. The results support both hypotheses, suggesting that migrant-native information deficits are relevant at the parental level but not at the children's level. Policies focused on increasing immigrant parents' knowledge of the local education system could reduce the gap between their expectations and their children's attainment.

1. Introduction

In Sweden, as in most Western European countries, children of immigrants (henceforth

'migrants') tend exhibit a lower school performance than the children of the native majority (henceforth 'natives'), mostly due to their (on average) less favourable socio-economic conditions (Heath & Brinbaum, 2014; Jonsson & Rudolphi, 2011). At the same time, they and their parents generally express high educational expectations, especially once performance is considered. Immigrants' high expectations often translate into ambitious educational choices at educational transitions, thereby allowing them to partially reduce the attainment gap with respect to natives. The mechanisms behind immigrants' high educational expectations are not fully understood (Salikutluk, 2013; Tjaden & Hunkler, 2017). Two of the major hypotheses are 'immigrant optimism', which posits that immigrants are selected on positive traits such as ambition and drive, and 'information bias', which argues that immigrants' optimism largely reflects a lack of information on the realistic educational opportunities available to immigrant parents and their children. While empirically the 'immigrant optimism' hypothesis is the one best supported thus far (see for instance Cebolla-Boado & Soysal, 2018; Fernández-Reino, 2016; Tjaden & Hunkler, 2017), other studies have shown that it is not relevant to all groups or in all countries, and hence other hypotheses should not be disregarded yet (Salikutluk, 2013).

Beside the question of why immigrants have higher educational expectations, there is the question of whether the expectations of immigrants are comparable to those of natives in terms of how they influence educational attainment. This study aims to make a contribution to the empirical literature on ethnic inequalities in education by analysing how migration background moderates the relationship between educational expectations and the choice of upper secondary school at the end of compulsory schooling in Sweden. In contrast to most studies on the role of educational aspirations, I analyse separately the expectations of children from those of their parents, rather than assuming that they are identical. I test two hypotheses: the first one is that the educational expectations of immigrant parents are weaker predictors of their children's transition to the academic track than those of native parents. The second one is that for children, no such differences are present: I anticipate immigrant children's educational expectations to be as predictive of the transition to the academic track as those of native children. The proposed mechanism to explain such differences is information bias: I expect immigrant parents to hold less accurate information regarding the educational system

and their children's opportunities within it, compared to native parents, whereas I assume that no such gap is present among children.

To test these hypotheses, I use data from waves 1 and 3 of the Swedish section of the Children of Immigrants Longitudinal Study in Four European Countries (CILS4EU), a large-scale survey that followed youth in England, Sweden, Germany and the Netherlands from ages 14 through 16. The empirical analysis confirm the existence of positive choice effects for migrants in the transition to academic upper secondary school (AUSS) in Sweden, as well as the significance of parental and children's educational expectations as predictors of this transition. Finally, the results show that parental educational expectations are weaker predictors of actual transition to academic upper secondary when the parents are immigrants than when they are native, while no such native-immigrant differences are found when comparing children's expectations. The results could be interpreted as evidence that immigrant parents' educational expectations are less concrete than those of natives, perhaps due to insufficient information of either the host country's education system or of their children's own educational performance, as some scholars have previously suggested (Kao & Tienda, 1998; Salikutluk, 2013; Tjaden & Hunkler, 2017). In contrast, no such information bias was detected in the expectations of immigrant children, compared with native children.

2. Theory

The theoretical framework of this study comprises four important ideas in the field of educational stratification. The first one, often called the Wisconsin status attainment model, is that educational expectations are a predictor of socio-economic attainment, including final educational attainment (Feliciano & Rumbaut, 2005; Sewell, Haller, & Portes, 1969). Educational expectations refer to realistic educational aspirations that take practical constraints into consideration, as opposed to idealistic educational aspirations, which are detached from constraints (Salikutluk, 2013, p.8). Hence, educational expectations can be seen as educational goals that individuals regard as feasible. As Feliciano & Rumbaut (2005) observe, there are two main perspectives on how educational expectations affect attainment: one perspective regards expectations as ambitions and thus as a psychological resource that can aid students to boost their educational careers, while the other perspective regards expectations as "realistic

calculations of the prospects for future education" (Feliciano & Rumbaut, 2005, p.1088). These views are not mutually exclusive, and for the purposes of this paper it is not important to ascertain which one is more accurate. Rather, what is significant is the idea that educational expectations are important predictors of attainment even after taking all other factors into consideration.

The second idea on which this study builds is 'immigrant optimism' and argues that immigrants are positively selected, from among their origin populations, with regards to their ambition for upward social mobility (Dollmann & Weißmann, 2019; Feliciano & Lanuza, 2016; Kao & Tienda, 1995). Because of this, immigrant parents tend to hold very high educational expectations for their children, who often internalise these expectations as their own goals. These high expectations are often contrasted with their families' socio-economic status, which in most cases is modest. 'Immigrant optimism' theory is closely related to the 'family mobilisation' hypothesis, which posits that immigrant parents have high educational expectations for their children because they hope to attain, through their children's educational and occupational success, the desired social mobility that often eludes first-generation immigrants (Heath, Rothon, & Kilpi, 2008; Zeroulou, 1988). More recently, some scholars have argued that educational selectivity could also account for immigrants' high educational expectations (see for instance Engzell, 2019; Feliciano & Lanuza, 2016): while migrants tend to have below-average education levels in the context of their host countries, they are often positively selected on education in their origin countries.

A third element of the theoretical framework is the information bias hypothesis, which posits that the educational expectations of immigrants are less concrete than those of natives, and are therefore weaker predictors of educational attainment (Kao & Tienda, 1998). This does not contradict the two theoretical ideas described above, namely that educational expectations are significant predictors of educational attainment, and that immigrants tend to have higher educational expectations than natives, especially after taking socio-economic status (SES) into consideration. There is evidence that the process of generation of educational expectations often differs between ethnic majority and ethnic minority households (Feliciano & Rumbaut, 2005). For instance, Qian & Blair (1999) found that, in the USA, the educational expectations of white students were more strongly dependent on SES than those of minorities. For immigrant-origin

minorities, this could reflect self-selection on positive traits (as suggested by the immigrant optimism hypothesis), but alternatively it could be explained by information biases: immigrant households' educational expectations could be affected by "missing information and knowledge about the host country's educational system" (Salikutluk, 2013, p.11). If this is the case, the lofty educational goals expressed by immigrants might not be matched with concrete actions to attain such goals, and hence they will fall short of them. However, this hypothesis is not detailed with regards to the level (that of parents or of children) at which the information bias occurs. Presumably, information bias is more serious at the parental level, since children of immigrants are almost invariably more steeped in the local culture and have a better understanding of the education system than their parents. Theoretically, the 'immigrant optimism' and 'information bias' hypotheses are not mutually exclusive, but rather they can both explain why immigrants have such high educational expectations.

The fourth and last element of the theoretical underpinning of this is Boudon's conceptual decomposition of educational attainment into the processes that affect educational performance, on the one hand, and those that affect educational choices, on the other (Boudon, 1974). Inequalities in educational attainment may thus result from inequalities in performance (which are usually called performance or 'primary' effects) and in choices (choice or 'secondary' effects). Performance effects are assumed to be more related "to socialisation and parental involvement in children during childhood", which are strongly related to socio-economic status, whereas choice effects are "the function of intentional and forward-looking decisions grounded in considerations about the costs and benefits of education as well as the probability of succeeding" and hence are more closely related to educational expectations (Erikson & Jonsson, 1996, p.488; Jonsson & Rudolphi, 2011). This distinction is important, as it enables us to analyse separately the decision-making process of specific groups (e.g. natives and migrants) from their prior educational performance. This study will focus on native-migrant differences in the decision-making process (i.e. at educational transitions). Thus, the first three theoretical elements listed (i.e. the role of educational expectations, immigrant optimism and immigrants' information bias) will be discussed exclusively within the context of decision-making processes, controlling on performance.

3. Previous research

In Sweden, and elsewhere in Western Europe, recent empirical research on ethnic inequalities in educational attainment has produced consistent results, with few exceptions[1]: by and large, immigrants and their descendants perform below the level of natives but make more ambitious choices, after controlling for performance (Heath & Brinbaum, 2014; Jackson, Jonsson, & Rudolphi, 2012; Jonsson & Rudolphi, 2011). Their low performance is largely explained by their on-average lower socio-economic background (e.g. lower parental education and lower household income) as well as by immigration-related resource deficits (for instance, the limited language proficiency of parents, which can affect their children's educational performance). At the same time, at educational transitions immigrant-origin children are more likely than natives to opt for the academic tracks rather than vocational ones, especially after controlling for prior performance. In sum, for the most part, migrants exhibit negative performance effects but positive choice effects in school.

Some studies have focused on the contrast between immigrants' positive attitudes to education (including high educational expectations) and their less-than-stellar performance that, even in the presence of ambitious choices, depresses overall attainment. In the Swedish context, an explanation put forth by Engzell (2019) is that many immigrants are relatively well-educated by the standards of their origin societies (which boosts their educational expectations for their children) but low educated by the standards of Swedish society (which limits their capacity to support their children's educational careers). Thus, while children often internalise their parents' educational expectations and make ambitious choices at educational transitions, this is not enough to compensate for the negative performance effects derived of having parents with a low level of education relative to the host society. He concludes that "parents' educational selectivity may confer high expectations but only limited means to fulfil them" (Engzell, 2019, p.98).

[1] One exception is England, where immigrant-origin children actually match or surpass natives in their educational performance and overall attainment. See for instance Fernández-Reino (2016) or Kalter et al (2018).

However, Engzell's (2019) analysis focuses on children with immigrant parents and does not explicitly compare the role of parental educational expectations in the transition to upper secondary school of natives with that of migrants. Instead, it compares the educational expectations and outcomes of different immigrant groups with reference to their degree of educational selectivity. Moreover, Engzell's argument is important to explain performance effects (i.e. the native-migrant gap in educational performance) but not choice effects (i.e. native-migrant differences in educational choices, keeping performance constant). This study aims to test for native-migrant differences in the mechanism through which educational expectations affect educational choices at the transition to upper secondary school in Sweden. By analysing separately the educational expectations of children and those of their parents, I expect to ascertain whether the source of the native-migrant differences in the role of educational expectations lies with the parents or the children.

4. The Swedish context

Sweden was selected as the testing ground for the hypothesis of this study for three main reasons. The first one is that it is arguably the Western country with the best conditions for the integration of immigrants and their descendants. Sweden ranks first in the most recent Migration Integration Policy Index (Huddleston, Bilgili, Joki, & Vankova, 2015), which assesses the policies to promote the integration of immigrants in Europe, North America and Australia. As Engzell argues, Sweden's "egalitarian system with comprehensive and fully publicly funded schooling makes Sweden a limiting case, with opportunities being more equal than almost anywhere" (Engzell, 2019, p.88). Moreover, there is substantial empirical evidence that standardised, choice-driven educational systems, such as that of Sweden, decrease educational inequality compared with stratified systems with early tracking, such as the German or Dutch system (Van de Werfhorst & Mijs, 2010). This means that, by and large, the causes of ethnic inequalities in educational outcomes in Sweden are more likely to result from group differences in socio-demographic and socio-economic characteristics rather than institutional characteristics that reproduce or exacerbate inequality of opportunity.

A second reason for choosing Sweden has to do with the country's highly diverse immigrant population, in which no single ethnic, regional or national group stands out.

This diversity results from a fairly recent, but complex immigration history starting with labour recruitment schemes in the 1960s to face labour shortages. The first large immigration flows were from other Nordic states (mostly Finland) and to a lesser extent from Southern Europe and the former Yugoslavia (Jonsson & Rudolphi, 2011). After the 1973 oil crisis, labour immigration was restricted but humanitarian immigration accelerated as Sweden received large number of refugees from Asia, Africa, the Middle East and Latin America fleeing civil war and political persecution. In the 1990s, Sweden also received large numbers of refugees from former Yugoslavia as the region descended into civil war. The diversity of Sweden's second-generation immigrant youth means that it is plausible to analyse this group as a whole and draw conclusions that are unlikely to be driven by a dominant ethnic sub-group.

Finally, a third reason for focusing in Sweden is data availability: of the four CILS4EU countries, only in England and Sweden can I analyse the first educational transition between waves 1 and 3, since in the Netherlands and Germany students were tracked into academic and lower or vocational tracks before the first wave of the survey was collected. Thus, while in England and Sweden I can measure student characteristics before they are sorted into tracks, this is not possible in the Netherlands and Germany. Unfortunately, the low rate of participation of parents in CILS4EU in England (with 63% non-response) means that it is not possible to carry out a comparative analysis with Sweden and England.

The transition to upper secondary school in Sweden

At the end of compulsory education (which covers grades 1 through 9), pupils in Sweden overwhelmingly (i.e. close to 98%) opt to enrol in upper secondary school (Jonsson & Rudolphi, 2011, p.499). Provided that students did not fail core subjects (Swedish, Maths or English), they are at this point free to choose, together with their parents, from among 18 upper secondary school programmes. However, of these six are academic programmes (which prepare students for higher education) and the remaining 12 vocational programmes[2]. Students who do not qualify for upper secondary school (most often due to failing Swedish, English or Math) but who wish to prolong their

[2] The key distinction is between academic upper secondary school (AUSS), which leads to the university entrance qualification (*högskoleförberedande*), and vocational (*yrkesförberedande*) secondary school.

education, must enrol in an "introductory programme" that prepares them for upper secondary school (Halldén, 2008). Both academic and vocational programmes last three years and, while in principle both types qualify students for university, "those who follow the academic route have much higher chances, and de facto propensities, to continue to the university level education" (Jonsson & Rudolphi, 2011, p.494). Therefore, it is reasonable to conceptualise the trajectories of the youth in Sweden, upon completion of compulsory schooling, as a dichotomy: while there might be other (longer) routes, academic upper secondary school (AUSS) is the standard route to higher education whereas other routes after compulsory school can be largely characterised as not being conducive to higher education.

5. Data, measures and methods

The data are drawn from the Swedish subsample of the Children of Immigrants Longitudinal Survey in Four European Countries (CILS4EU) (Kalter et al., 2013, 2014, 2015). This research project collected nationally representative samples of teenagers in Germany, England, the Netherlands and Sweden, oversampling schools with a high share of immigrant-origin pupils. Within schools, classes were sampled at random. Three waves of the survey were collected in a harmonised fashion in each of the four countries, during the school years 2010-2011, 2011-2012 and 2012-2013. In the first wave of the survey, parents were also interviewed.

For the analysis, I use data for Sweden from waves 1 and 3 of CILS4EU[3]. In Sweden, 5,025 pupils in 126 schools and 228 school classes participated in the first wave of the survey, but the parents of only 2957 of them participated in the survey. Between waves 1 and 3 there was significant panel attrition: of the pupils who participated in wave 1, and whose parents participated too, only 1786 participated again in wave 3. Due to the list-wise deletion of observations with missing values in key variables, the analytical sample is 1214. It is worth noting that panel attrition did not occur at random: generally, migrants were more likely than natives to abandon the survey, and low-SES individuals more likely than high-SES ones to do so. This means that the individuals in the analytical sample are positively selected (see the Appendix for more details).

[3] Wave 2 is not used as no questions regarding educational status were asked in Sweden, even though must pupils transitioned from compulsory schooling to upper secondary school between waves 1 and 2.

Measures

The dependent variable is dichotomous and indicates whether or not the child is enrolled in academic upper secondary school (AUSS) in wave 3, as opposed to vocational upper secondary school (VUSS) or having left school. AUSS comprises the six preparatory national programmes, which qualify students for higher education in Sweden (Halldén, 2008). The variable takes the value 1 if the child is enrolled in AUSS and 0 otherwise. The main grouping variable is migration background, which is also dichotomous: children with at least one foreign-born parent are classified as having a migration background, while those without foreign-born parents are classified as not having a migration background. I refer to the former group as migrants and to the latter as natives, acknowledging that second-generation migrants are in fact native-born and that many children with two native parents (whom I classify as natives) might nevertheless have foreign-born grandparents.

The key explanatory variables are children's and parents' educational expectations in wave 1. I dichotomise these variables as follows: Children's educational expectations are marked as high (1) if their answer to the question "what is the highest level of education that you think you will actually get?" was "University degree", and low (0) otherwise. Similarly, parental expectations were coded as high (1) if a parent answered the question "what is the highest level of education that you think your child will actually get?" with "University degree" and low (0) otherwise.

I include several control variables. Besides gender, I include a dichotomous variable of family structure (whether or not a child lives with both biological parents in one household). To account for family socio-economic status (SES), I include the highest parental ISEI value[4] as a continuous variable. The variable was z-standardised to facilitate group comparisons and results interpretation. Also, the highest educational degree of either of the parents was also included as a categorical variable with three levels: primary education or no education, secondary education, and tertiary education. To account for educational ability, I include two measures: cognitive ability and language ability. Cognitive ability was measured through a 27-item standard cognitive

[4] ISEI stands for International Socio-Economic Index of Occupational Status. Constructed from ISCO 2008 using the conversion methodology laid out by Ganzeboom & Treiman (1996).

ability test comprising exclusively graphical problems, in order to preclude the possibility of cultural or language biases (CILS4EU, 2016). Language ability was assessed through a 30-item multiple-choice test in which pupils had to identify antonyms. These tests were administered to pupils in schools during wave 1. In the analysis, the results were transformed into z-scores to facilitate group comparisons and the interpretation of results.

Analysis strategy

My analysis is conducted in two stages. In the descriptive part, I compare migrants and natives across all the variables relevant for the empirical analysis, in order to provide an overview of the similarities and differences between these groups. Then, I estimate four logistic regression models in which the dependent variable is transition to AUSS, which is dichotomous. In this stage I will assess (1) whether migrants exhibit positive choice effects in the transition to AUSS, (2) the relative importance of parental educational expectations vis-a-vis children's expectations at this transition and (3) whether migration background mediates the relationship between educational expectations and transition to AUSS.

In all models, the dependent variable is whether the child is enrolled in AUSS in wave 3. All explanatory variables are measured in wave 1. The key variables are migration background and the educational expectations of children and their parents. These variables have been dichotomised. I proceed in step-wise fashion, starting with a model with only one covariate (to assess gross ethnic disadvantages at this educational transition), adding in Model 2 covariates that might influence this transition, and then including educational expectations in Model 3. Finally, in Model 4 I add two interaction terms: migration background is interacted both with parental and with children's educational expectations, in order to test the hypothesis that educational expectations are weaker predictors of transition to AUSS among migrants than among natives. The results are reported as average marginal effects (AME).

6. Results

I first examine descriptively the differences between natives and migrants in the dependent as well as in the explanatory variables. This comparison is shown in Table 1

below. In some variables, a pattern of disadvantage of migrants is visible. For instance, in terms of family structure, I see that in the analytical sample natives are more likely than migrants to live with both parents (75% versus 65%, respectively). Migrants' cognitive ability is moderately lower than that of natives (z-difference of 0.25) but the gap is more than twice as large in language ability (z-difference of 0.55). This could be an indication that the limited Swedish language skills of many first generation immigrants still has an effect on the degree of Swedish language proficiency of their children at age 14. There is also a large native-migrant gap with regards to the occupational status of the parents (i.e. the highest ISEI score): native parents tend to hold more prestigious jobs than migrant ones (z-difference of 0.36). Consistent with this result is the fact that migrant children are more likely to have lowly educated parents than natives, even though overall both groups have well-educated parents.

However, this pattern of disadvantage of migrants contrasts with a slight migrant advantage in expectations: Both migrant parents and their children express higher educational expectations than natives, although the differences are not statistically significant at the 5% level. With regards to the dependent variable, transition to AUSS, the value for natives and migrants is virtually identical: 67% of native children and 66% of migrant children chose to attend AUSS. This suggests that, to some extent, migrants' gross disadvantages (e.g. lower socio-economic status and lower cognitive and language ability) are compensated by their advantages in educational expectations, so that at the end the two groups are very similar in their transition probabilities to AUSS.

Table 1 - Unweighted summary statistics by group

Variable	Measure	All	Natives	Migrants	p-value of test of group differences[1]	Type of test
Household type	% Living with both biological parents	0.72	0.75	0.65	0.00	$\chi 2$
	% Other	0.28	0.25	0.35		
Gender	% Girl	0.58	0.56	0.61	0.18	$\chi 2$
	% Boy	0.42	0.44	0.39		
Cognitive ability	Mean (z-standardised)	0.09	0.17	-0.08	0.00	t
Language ability	Mean (z-standardised)	0.15	0.32	-0.23	0.00	t
Highest parental ISEI	Mean (z-standardised)	0.13	0.24	-0.12	0.00	t
Highest parental education	% Primary or none	0.02	0.01	0.06	0.00	$\chi 2$
	% Secondary education	0.30	0.30	0.29		
	% Beyond secondary education	0.68	0.69	0.65		
Child's educational expectations	% University	0.61	0.59	0.65	0.08	$\chi 2$
	% Less than university/ Don't know	0.39	0.41	0.35		
Parent's educational expectations	% University	0.75	0.74	0.78	0.26	$\chi 2$
	% Less than university/ Don't know	0.25	0.26	0.22		
Status in wave 3	% in Academic Upper Secondary School	0.66	0.67	0.66	0.99	$\chi 2$
	% in Vocational Upper Secondary School/Other education/Out of school	0.34	0.33	0.34		
Observations		**1214**	**852**	**362**		

1 - The null hypothesis is that there are no group differences

The results of the logistic regression models are shown in Table 2 below. Model 1 shows that there are no gross ethnic disadvantages at the transition to AUSS, in line with the information in Table 1. This means that, even before controlling for anything else, migrants are not disadvantaged with respect to natives at this transition in Sweden. However, from Model 2 it can be seen that the dimensions in which migrants are disadvantaged with respect to natives (namely family structure, cognitive and language ability, and family socio-economic position) are all significant predictors of the transition to AUSS (in contrast, parental education is not a significant predictor). Given the fact that overall transition probabilities are virtually identical for natives and migrants, this means that migrants' disadvantage in SES and ability must be compensated by an advantage in other traits, which are captured by the dummy variable of migration background. The average marginal effect for migration background in Model 2 indicates that, controlling for all else, migrants have an 11% higher probability of choosing AUSS than natives. This result is evidence for positive ethnic choice effects in the transition to upper secondary school in Sweden, and is thus in line with prior analyses of this country (Jackson et al., 2012; Jonsson & Rudolphi, 2011).

Model 3 seeks to explain away the ethnic choice effects found in Model 2 by including children's and parents' educational expectations in wave 1, as I expect at least some part of the migrants' advantage at this educational transition to be explainable by their higher educational expectations. However, the model is agnostic regarding the relative importance of children's and parents' expectations and hence both are included. The results of Model 3 show that both type of expectations are highly significant, but the parental ones seem to have a stronger effect on transition probabilities (the average marginal effect of high parental expectations is 0.22, compared with 0.16 for high children's expectations). Comparing Models 2 and 3, it is noteworthy that, once educational expectations are added in Model 3, many control variables that were significant in Model 2 are now no longer significant – such as family structure, gender and socio-economic status. In contrast, cognitive and language ability remain strongly significant in Model 3, and their average marginal effects are only slightly lower after taking expectations into consideration. Another change worth mentioning is that of migration background: in Model 3, the average marginal effect of having a migration background is no longer significant at the 5% level (though they remain positive and significant at the 10% level). This suggests that much of the ethnic choice effects are

explainable by educational expectations, in line with the theory of "immigrant optimism".

Finally, in Model 4 the interaction term of migration background and educational expectations is added in order to test the main research hypothesis. The interaction of children's expectations and migration background is positive, but not significant. However, that of parental expectations and migration background is negative and significant: the AME of this interaction is -0.17. At the same time, the AME of parental expectations in Model 4 increased in comparison with Model 3, from 0.22 to 0.27, while the AME of children's expectations decreased from 0.16 to 0.13. The results of Model 4 allow us to assess how migration background moderates the effect of educational expectations on the transition to AUSS: for natives, high parental expectations increase the probability of realising this transition by about 27%, whereas for migrants this figure is only about 10% (resulting from the addition of the AME of parental expectations, which is 27%, and that of the interaction term, which is around -17%). This result is in line with the two hypotheses: it supports the notion that immigrant parents' educational expectations less strongly predict their children's educational transitions and therefore their attainment. This does not contradict two other facts supported by my analysis, namely that educational expectations do matter for attainment and that migrants have higher educational expectations than natives. As regards children's expectations, the corresponding average marginal effects are estimated at around 13% for natives and 22% for migrants, although the difference between the two is not statistically significant. The AME of the variables of interest from Model 4 are displayed graphically in Figure 1:

Figure 1 - Average Marginal Effects of educational expectations and migration background in Model 4

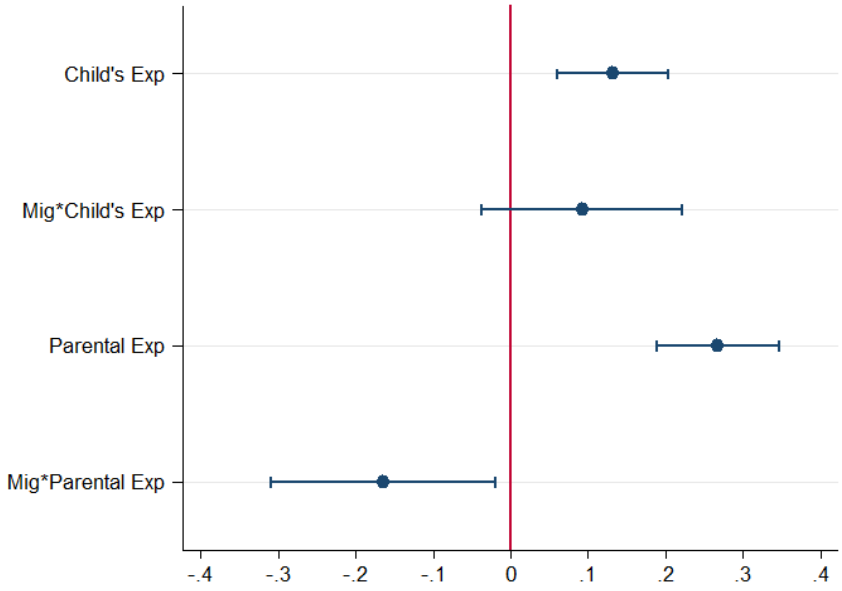

Table 2 - Average Marginal Effects on transition to academic upper secondary school (AUSS)

Dep. var. = Enrolled in AUSS in Wave 3	Model 1	Model 2	Model 3	Model 4
Migrant = Yes (ref: No)	-0.003	0.111***	0.060*	0.123*
	(0.029)	(0.032)	(0.034)	(0.064)
Intact family = Yes (ref: No)		0.071**	0.035	0.046
		(0.033)	(0.032)	(0.033)
Gender = Female (ref: Male)		0.061**	0.023	0.020
		(0.029)	(0.029)	(0.029)
Cognitive score		0.012***	0.009**	0.009**
		(0.004)	(0.004)	(0.004)
Language score		0.026***	0.021***	0.020***
		(0.004)	(0.004)	(0.004)
Highest parental ISEI		0.047***	0.024	0.024
		(0.018)	(0.018)	(0.018)
Parents' highest education = Primary		--	--	--
		--	--	--
Parents' highest education = Secondary		-0.048	-0.027	-0.023
		(0.105)	(0.100)	(0.096)
Parents' highest education = Tertiary		0.053	0.010	0.013
		(0.103)	(0.098)	(0.094)
Child's Educ. Expectations = High (ref.: Low)			0.163***	0.131***
			(0.030)	(0.036)
Migrant × Child's Educ. Expectations				0.092
				(0.066)
Parent Educ. Expectations = High (ref.: Low)			0.216***	0.268***
			(0.035)	(0.040)
Migrant ×Parent's Educ. Expectations				-0.165**
				(0.074)
Observations	1,214	1,214	1,214	1,214
Pseudo-R^2	0.0000	0.1062	0.1643	0.1678
Akaike Information Criterion	1508.3	1362.5	1279.1	1277.9

Clustered standard errors of AME in parentheses (cluster: schools). Unweighted results.

7. Conclusions

This study has explored the hypothesis that immigrant households' educational expectations are less concrete than those of native households at the transition to upper secondary school in Sweden due to the existence of information biases. I tested this hypothesis on data from waves 1 and 3 of the Swedish part of the CILS4EU project, which allows us to differentiate between the expectations of parents and those of their

children. Due to its successful integration policies, relatively low levels of social inequality, and comprehensive, choice-driven education system, Sweden represents a 'least likely' case, inasmuch as it allows us to compare the educational trajectories of natives and immigrants under conditions more equitable than those found almost anywhere else (Engzell, 2019).

The key results are threefold. Firstly, in Model 2 I replicated the finding that immigrants exhibit positive choice effects at the transition to AUSS in Sweden, and showed in Model 3 that these effects are mostly explained by educational expectations. Secondly, the analysis showed that the parental educational expectations are more important than children's own expectations in predicting such transition. And thirdly, the results of Model 4 showed that immigrant parents' educational expectations are weaker predictors of transition to upper secondary school than native parents' expectations. This is the main empirical contribution of the study: prior studies had underlined the immigrant advantage in expectations, but here the strength of the relationship between educational expectations and educational choices is analysed separately for parents and children for the first time.. While the result does not warrant any specific causal interpretation, it is at least suggestive of information deficits on the part of immigrant parents, which could result in their expectations being less concrete than those of natives as some scholars have proposed (Kao & Tienda, 1998). Meanwhile, no significant ethnic differences are found regarding the predictive strength of children's own educational expectations, which suggests that information biases in immigrant households are located at the parental, rather than at the children's level.

The study's main limitation is the positive selection of the analytical sample that resulted from the self-selection of parents into the parental survey conducted in wave 1, on the one hand, and from panel attrition between waves 1 and 3, on the other. In both cases, permanence in the survey is associated with higher cognitive and language ability as well as higher socio-economic status. However, if information gaps at the parental level are the mechanism that explains my results, then the positive selection of my analytical sample does not threaten the external validity of the results: the information gap between native and migrant parents is likely to be larger in a randomly selected sample than in a positively selected one. Another limitation of the study is the fact that, due to the low sample size (n = 1214), it was not possible to distinguish among specific

ethnicities. Previous studies have shown that the relationship between educational aspirations and educational attainment often differs by ethnic group (Qian & Blair, 1999; Salikutluk, 2013).

The policy implications of the results are not fully clear, because a precise mechanism that explains the native-immigrant differences in the predictive power of parental educational expectations on educational choices could not be established. This is partly because there is no unanimous theoretical view on educational aspirations. In a rational choice framework, in which educational expectations are mostly viewed as realistic assessments of likely educational outcomes (Feliciano & Rumbaut, 2005), the observed results could be interpreted as evidence for an information bias affecting immigrant parents, as otherwise their educational expectations should be as strongly associated with their children's actual educational decisions as those of natives. If this is the case, an adequate policy solution would to provide more information to immigrant parents on the structure of educational systems as well as feedback on their children's performance.

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