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*Research Article*

**Adolescents' educational aspirations and ethnic  
background:  
The case of students of African and Latin  
American migrant origins in Spain**

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## **Adolescents' educational aspirations and ethnic background: The case of students of African and Latin American migrant origins in Spain**

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### **Abstract**

#### **BACKGROUND**

Minority students were found to have high educational aspirations, considering their background characteristics. This finding is often attributed to 'migrant optimism.' Yet, whether socioeconomic, educational, or demographic differences between and within ethnic groups mediate and/or moderate students' educational aspirations remains an inconclusive question.

#### **OBJECTIVES**

This study investigates the educational aspirations of children of African and Latin American migrants in Spain, looking at four critical factors: (1) family background, (2) educational performance, (3) years lived in Spain, and (4) language used at home.

#### **METHODS**

Data comes from the 2010 General Evaluation of Educational Diagnostic (GEED) on lower-secondary students aged 14 (n = 19,293), on average. Multivariate logistic models are applied using mediation and moderation analyses.

#### **RESULTS**

Results show that (1) minority students have higher college aspirations than students of Spanish origin after accounting for parental socioeconomic status and educational performance; (2) ethnic differentials in aspirations – especially for pupils with Latin American origin – are concentrated among low-performing and disadvantaged students; (3) recent arrival in Spain is not significantly associated with differences in educational aspirations within minority groups; (4) speaking Spanish at home does not lead to differences in aspirations for pupils of African origin.

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## **CONCLUSIONS**

Migrant optimism, as opposed to family language use and years of contact with the Spanish culture and society, seems to be an important factor for the high (net) educational aspirations of students from African and Latin American backgrounds.

## **CONTRIBUTION**

The article provides new evidence on ethnic heterogeneity in educational aspirations, being the first that uses representative data from the whole Spanish educational system.

## **1. Introduction**

Adolescents' educational aspirations are key predictors of their future educational attainment (Sewell, Haller, and Portes 1969; Portes, McLeod, and Parker 1978). From the Wisconsin model of status attainment (Sewell and Hauser 1975), parental socioeconomic background and educational performance are established to be strongly associated with educational aspirations.<sup>3</sup> The focus on ethnic differences in educational aspirations is particularly relevant for the ethnic stratification literature, as it is a valid indicator of (potential) future integration, labour market outcomes, and upward social mobility (Breen and Jonsson 2005; Heath, Rethon, and Kilpi 2008). Previous studies on different Western industrialised countries found that the children of migrants are generally disadvantaged in their family background and educational performance at different educational stages (Kalter, Granato, and Kristen 2007; Heath, Rethon, and Kilpi 2008; Azzolini, Schnell, and Palmer 2014; Gracia, Vázquez-Quesada, and Van de Werfhorst 2016). Yet, research on European countries and the United States found that, after accounting for their disadvantaged background, adolescents of ethnic minority groups tend to have higher aspirations than pupils from the national majority (Qian and Blair 1999; OECD 2006; Salikutluk 2016).

Three main theoretical approaches, not necessarily mutually exclusive, have been elaborated to explain the overall high net aspirations of minority students. First, the 'migrant optimism' explanation posits that first-generation migrants are a positively selected demographic group with generally unfulfilled (upward) social mobility ambitions in the host country, which are passed on to their children as high educational

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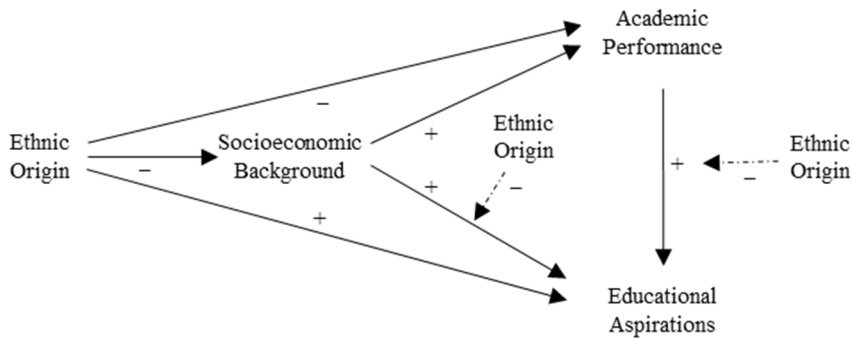
<sup>3</sup> Throughout the paper we will refer to 'educational performance' as an indicator measured at the same time point as aspirations. Thus, we will not refer to the pupil's future transition rates to upper-secondary education, but to their current performance. Our educational performance indicators will refer to (1) standardized academic tests (relatively objective measures of academic performance) and (2) measures of performance that mainly deal with teachers' and schools' decisions on the student, such as grade retention (teachers' and school based measures).

and occupational aspirations (Kao and Tienda 1995). Second, the ‘information bias’ approach argues that migrant families and their children tend to overestimate their real schooling and labour market chances because of their lack of information on how these institutions operate, for example via cultural or linguistic barriers (Kao and Tienda 1998; Lareau 2015). Third, the ‘blocked opportunities’ thesis suggests that minority pupils anticipate ethnic discrimination in their future school-to-work transition, which brings them to aim high in the educational system to overcome potential discrimination in the labour market (Heath and Brinbaum 2007; Jackson, Jonsson, and Rudolphi 2012).

The international ethnicity literature on educational aspirations offers quite limited evidence on these theorised mechanisms and is restricted to specific countries and variables. In the United States studies suggest that migrant optimism, typically measured as minority parents’ aspirations, influences the high educational aspirations of minority students (Kao and Tienda 1995; Qian and Blair 1999; Raleigh and Kao 2010). Research in Europe focused only on some specific countries. Teney, Devleeshouwer, and Hanquinet (2013), using a mixed-method approach with Belgian data, found that perceived job market discrimination is not associated with high educational aspirations, yet discrimination experienced at school was linked to high educational aspirations for some ethnic groups. Salikutluk (2016), analysing survey data from Germany, found that adolescents from Turkish origins, as opposed to adolescents of German origin and those coming from the former Soviet Union, display higher educational expectations that are partly attributable to social mobility aspirations and parental expectations. Similar results on high parental expectations among ethnic minorities were found by Brinbaum and Cebolla-Boado (2007) in France. Using data from England, Fernández-Reino’s (2016) study reveals that the gap in aspirations for minority pupils can be attributed to declared immigrant optimism, but not to anticipated discrimination.

Previous studies, overall, suggest that migrant optimism and upward social mobility aspirations play an important role in the high educational aspirations of minority students. However, limited accumulated knowledge has been provided on the structural factors and specific mechanisms that lead to differences between the national majority and minorities in educational aspirations (Cebolla-Boado and Soysal 2017), and less so within minority groups (Heath, Rethon, and Kilpi 2008; Salikutluk 2016). These gaps motivate further efforts in this direction.

**Figure 1: Conceptual model**



Source: Authors' own elaboration

Note: + positive relationship; - negative relationship; ◀--- interaction effects

In this study, we propose three main analytical levels to investigate ethnic differentials in educational aspirations: (1) selection, (2) moderation, and 3) variation within minorities. First, by 'selection' we refer to ethnic distribution across groups with distinct educational aspirations. Selection should be taken into account when analysing educational aspirations of minority students, not only the fact that minority families are overrepresented into disadvantaged families (as considered in many studies), but also the potential ethnic selection in students with lower educational performance (less considered in previous studies). Second, by 'moderation' we refer to the different impact that predictors of educational aspirations have across ethnic groups. Drawing on the migrant optimism thesis, minorities might be less responsive – compared to students from the national majority – to their objective socioeconomic disadvantage (driven by social mobility goals) and potential low educational performance (driven by strong career ambitions). Third, by 'variation within minorities' we consider possible alternative explanations to the migrant optimism hypothesis. We highlight two specific indicators, one related to family potential access to information (e.g., parents' language use of the host society's official language), and another related to potential assimilation and integration in the host culture (e.g., children's years lived in the host country). Figure 1 above summarizes the analytical framework that guides this study, which is developed in detail in the theoretical framework section.

Our study investigates the main determinants of educational aspirations among students of ethnic minority groups by focusing on the children of African migrants and Latin American migrants in Spain. We use representative data from the 2010 General Evaluation of Educational Diagnostic (GEED), containing detailed information on educational performance, parental background, and students' educational aspirations for

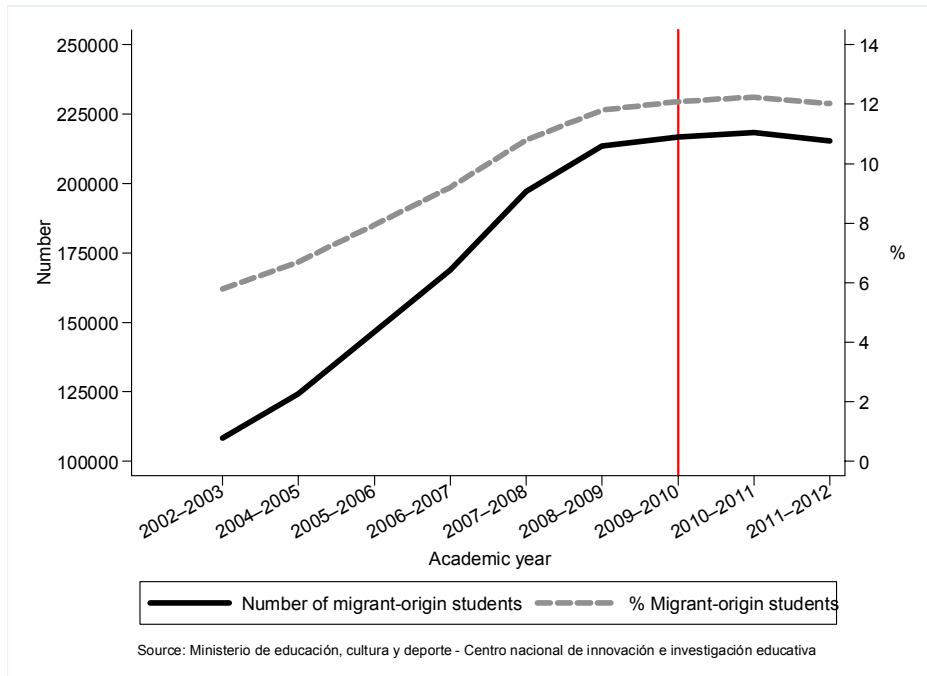
a national sample of pupils at Grade 8 (second year of lower-secondary education). Our main research questions can be summarized as follows. First, we ask whether the children of African and Latin American migrants present gross differences in educational aspirations with respect to their counterparts with Spanish origins. Second, we analyse whether ethnic variation in educational aspirations is mediated and/or moderated by parental socioeconomic background and students' educational performance. Third, we investigate whether educational aspirations differ within ethnic minority groups, depending on the years lived in the country and language spoken at home.

Spain is a relevant case for the international ethnicity literature, at least for three reasons. First, Spain is a quite new destination country that experienced intense and sudden immigration flows in recent years. This differs from many Western European countries that received important fluxes of immigration already by the 1950s–1960s, like Germany and the United Kingdom, previously investigated in the literature on aspirations (Fernández-Reino 2016; Salikutluk 2016). Second, our focus on African and Latin American minorities – the latter less represented in Western European countries – captures two large disadvantaged groups in the Spanish social structure that also present interesting differences in their cultural, socioeconomic, and integration profiles (Reher and Requena 2009). Third, previous studies on Spain offered inconclusive evidence on minorities' educational aspirations, and were restricted to specific regional settings (Portes et al. 2013; Cebolla-Boado and Martínez de Lizarrondo 2015).

## **2. The Spanish context**

Spain experienced a steep and unprecedented growth in immigration flows during the so-called Economic Boom decade of 1997–2007, growing from 50,000 immigrants arrived by 1998 to one million immigrants by 2007 (Garrido 2005; Reher and Requena 2009; Bernardi, Garrido, and Miyar Busto 2011; Martínez García 2013; Mato Díaz and Miyar Busto 2017). During this period Spain was one of the countries with the largest immigration flows in the world. The 2008 Great Recession quite strongly affected the economic conditions of families of ethnic minority groups and some left the country (Mooi-Reci and Muñoz-Comet 2016). Yet, as shown in Figure 2, the share of minority students peaked at 12% by 2010. In 2010 individuals of Latin American origin represented the highest share of migrants in Spain (44%), followed by those from other EU countries (29%), and Africa (22%) (INE 2010).

**Figure 2: Children of migrants in secondary-school institutions in Spain**



Source: Ministerio de Educación, Cultura y Deporte – Centro Nacional de Innovación e Investigación Educativa

The national origin of migrants in Spain shows clear differences with respect to other European countries (Reher and Requena 2009). Migration fluxes in Spain were firstly filled by African migration during the 1990s (most coming from Morocco), and later by the substantial arrival of Romanians and migrants from Latin American countries during the 2000s, mainly coming from Ecuador, Colombia, Bolivia, Peru, and Argentina (from largest to smallest share) (Reher and Requena 2009; INE 2010). These migration fluxes occurred in a period of sustained economic growth with a large demand of low-skilled employment, increasing participation of Spanish young cohorts in college education, and of women into the labour force (Garrido 2005). Latin American migrants, and migrants from African origins to a higher extent, typically worked in low-skilled jobs in the agriculture, domestic services, tourism, industry, and construction sectors, while often residing in disadvantaged working-class neighbourhoods (Reher and Requena 2009; Vidal-Coso and Miret-Gamundi 2014).



The Spanish educational system combines a low level of stratification (i.e., first tracking at 16 years old) (Crul and Vermeulen 2003) with high levels of dropouts in compulsory education (lower-secondary), affecting working class and minorities particularly (Bernardi and Cebolla 2014; Miyar Busto 2017). Children of African migrants, and to a lesser extent those with parents born in Latin America, experience high levels of dropout (60% and 35%, respectively) and grade retention (Martínez García 2013), even after controlling for their disadvantaged socioeconomic backgrounds (Miyar Busto 2017).

The integration of Latin Americans in the Spanish society was relatively smoother than it was for African migrants. This can be partly attributed to the fact that Latin American migrants, compared to African migrants, share the language with Spaniards and tend to feel closer in cultural terms (Guzmán, Feliciano, and Jiménez Llanos 2011).<sup>4</sup> In relation to pupils from Latin American origin, pupils from African background are more disadvantaged at school (e.g., educational performance, grade retention), come from more modest family backgrounds, and have more difficulties with the Spanish language (or other regional languages like Catalan) (Carabaña 2004, 2006).

Only two studies, to our knowledge, have analysed the links between ethnicity and adolescents' educational aspirations in the Spanish context. Portes et al. (2013), using data collected from 2008 to 2010 across schools in the cities of Barcelona and Madrid, found that students of ethnic minority have lower or similar educational aspirations than adolescents with Spanish-born parents, with specific minority groups showing the lowest levels of educational aspirations (e.g., Argentinians, Ecuadorians, and Moroccans). However, it must be stressed that their study did not control for educational performance. They found a positive association between socioeconomic background and educational aspirations, and minor differences by parental language use and length of stay in Spain. Cebolla-Boado and Martínez de Lizarrondo (2015) analysed the educational aspirations of minority pupils in the region of Navarra with data from the General Evaluation of Educational Diagnostic (GEED) carried out in 2010. They found that adolescents of ethnic minority groups have significantly higher educational aspirations than adolescents of Spanish origin, after accounting for social background and educational performance. Using a multilevel design, their study on Navarra did not find (ethnic) peer effects at the school level on students' aspirations.

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<sup>4</sup> In a qualitative study drawing information from coordinators of integration programs among schools with high concentration of Latin American students in the Canary Island region, Guzmán, Feliciano, and Jiménez Llanos (2011) pointed out that "results confirm that teachers believe that the causes of learning difficulties in Hispanic children lie outside the school, and are more related with their social disadvantages than with their cultural origins." This research also pointed out the high parental expectations of Latin Americans towards their children's schooling.

These two studies, despite providing important insights, use different analytical approaches and offer contradictory findings on Spain. First, they focused on regions with different migration and socioeconomic contexts; the cities of Barcelona and Madrid have the highest rates of migrant population in Spain (circa 17%), while Navarra ranks around the average (circa 11%) (INE 2009). This motivates a study that considers a large representative sample of the whole Spanish educational system. Second, Portes et al. (2013) did not include objective measures of student educational performance, a key mediator and/or moderator variable to explain aspirations. This might explain why their results differ from those of Cebolla-Boado and Martínez de Lizarrondo (2015), whose work did include controls for educational performance. Third, both studies leave important questions inconclusive, like those related to the distribution of aspirations across different socioeconomic backgrounds and levels of educational performance (moderation), along with the potential role of integration mechanisms (e.g., parental language use, age on arrival in the country). We seek to fill these gaps in our study on Spain.

### **3. Analytical framework**

#### **3.1 Conceptualization of educational aspirations**

Adolescents' aspirations capture valuable information on their dreams, motivations, and idealistic beliefs that can potentially influence their future schooling and labour market transitions (Sewell, Haller, and Portes 1969; Portes, McLeod, and Parker 1978; Morgan 1998). The concept of 'aspirations' reflects on the goals that people can have in a world without obstacles. By contrast, the concept of 'expectations' implies that individuals express a set of goals by considering the existence of barriers and constraints, namely whether they assume they can 'realistically' reach one specific situation (Morgan 1998; Jacob and Wilder 2010; Portes et al. 2013). Ideally, one would investigate both educational expectations and aspirations. In this study we only analyse aspirations, as unfortunately we do not have information on expectations.

#### **3.2 Migrant optimism**

##### **3.2.1 Selection**

Ethnic differentials in educational aspirations need to be contextualized considering (1) students' social background, and (2) students' educational performance. Minority

students typically have high motivation and ambition (OECD 2006). However, the overrepresentation of minority pupils in disadvantaged social backgrounds and underperforming groups might lead them to not having, on average, higher (gross) aspirations than their counterparts from the national majority (Cebolla-Boado and Martínez de Lizarrondo 2015). Even if social background and academic performance may influence adolescents' aspirations differently across ethnic groups (see Section 3.2.2 on moderation effects), being raised in a disadvantaged socioeconomic background and obtaining low educational performance generally reduces students' college aspirations in different demographic groups (Kao and Tienda 1998; Khattab 2015). Therefore, one should account for family background and educational performance to properly adjust for ethnic differences in aspirations. We anticipate that students from African and Latin American minorities have considerably higher (that is, more optimistic) educational aspirations than students with Spanish-born parents, but these differences should be only observed after having properly accounted for selection of these minority groups into the most disadvantaged families and lowest educational performance (Miyar Busto 2017):

*Hypothesis 1a:* Children of African and Latin American migrants have higher educational aspirations than those with Spanish-born parents, but only after accounting for parental socioeconomic status and educational performance.

### **3.2.2 Moderation: Socioeconomic status and educational performance**

Research on educational inequality, as mentioned, suggests that pupils from working-class backgrounds have lower educational aspirations than privileged students. This is likely to be explained by social class differences in parental values, preferences or risk-aversion mechanisms (Lareau 2003; Breen and Goldthorpe 1997; Gambetta 1987). However, we expect that parental socioeconomic background will be less relevant in predicting educational aspirations among minority students than it is for the national majority. One reason can be related to (upward) social mobility ambitions. As put by Salikutluk (2016: 583), “even if [the] first generation finds itself at society’s lowest rank, their wish is maintained and passed onto the following generations [and so] the younger generation is expected to be successful in the host country and to realize their parents.” In addition, given that parents of ethnic minority groups are usually located in lower socioeconomic positions than they would be in their origin country (i.e., post-migration intra-generational downward mobility) (Feliciano and Lanuza 2017), the hypothesized high motivation and mobility goals of migrants and their children (Kirk et al. 2011; Aysa-Lastra and Cachon-Rodríguez 2013; Salikutluk 2016; Tjaden and

Hunkler 2017) could further lead to high aspirations among African and Latin American pupils. In short, we anticipate the largest differences in aspirations by ethnic status to be found at the bottom of the socioeconomic hierarchy:

*Hypothesis 1b:* The association between parental socioeconomic status and educational aspirations is stronger for students of Spanish origin than it is for students of African and Latin American background.

By the same token, we expect the educational aspirations of the children of migrants to respond differently to their educational performance than students with native-born parents. Minority students' aspirations would be less responsive to experiencing grade retention and low performance in standardized tests, as high levels of career ambitions (Kao and Tienda 1995) would lead them to have relatively high aspirations. Thus, the largest differences in aspirations by ethnic origin should be observed at the bottom of the educational performance distribution (measured as grade retention or academic standardized tests), while we should find ethnic convergence in (high) educational aspirations among students with higher educational performance:

*Hypothesis 1c:* The association between educational performance and educational aspirations is stronger for students of Spanish origin than it is for students of African and Latin American background.

### **3.3 Ethnicity-related determinants of educational aspirations**

#### **3.3.1 Differences by age of arrival in Spain**

We turn now to looking at specific characteristics within ethnic minority groups. Firstly, we rely on age on arrival in Spain as a proxy indicator of intercultural relations and acculturation, which “comprehends those phenomena which result when groups of individuals having different cultures come into continuous first-hand contact, with subsequent changes in the original culture patterns of either or both groups” (Redfield, Linton, and Herskovits 1936: 149). Changes in norms and attitudes require of intercultural exchange and can only develop over time and through years (Berry 2005). One can expect that insofar as the children of migrants spend more years of socialization in the host country, their beliefs and aspirations become closer to the ‘national norm.’ For instance, children and their families have had time and opportunities to get to know the educational system and labour market particularities after spending many years in the host country. From this approach, minority students

recently arrived in Spain during primary or secondary school (the 1.5 generation or migrant children arrived at ages 6–15) might have higher educational aspirations than those born in Spain (second generation), or fully educated in the Spanish educational system (the so-called 1.75 generation, arrived at ages 0–5):

*Hypothesis 2:* Minority students recently arrived in Spain during primary or secondary education have higher educational aspirations than those born or arrived in Spain before starting primary education.

### 3.3.2 Differences by language use

Secondly, we further explore differences within minority groups by looking at language use in the family. The language use at home is a relevant indicator of families' potential access to valuable information on the schooling system. In line with the information bias approach, Kao and Tienda (1998) argue that minority pupils can lack access to precise information on the actual levels of performance and effort needed to succeed at school. This might reflect minorities' difficulties to get precise information on how the schooling system works (Cebolla-Boado and Martínez de Lizarrondo 2015; Kirk et al. 2011). Speaking the official language of the country might allow migrant parents to read published information, as well as to access to information via interpersonal relations with members of the community, which might provide useful reliable knowledge on how the schooling system works. This information could be transmitted from parents to children in everyday family life. The Spanish case provides an interesting setting to test this hypothesis. Unlike (Spanish-speaking) Latin American migrants, African migrant families (from Arabic or sub-Saharan origin) do not necessarily speak Spanish. We expect that speaking Spanish at home, or other official languages (e.g., Catalan, Galician), brings children of African origin to show lower aspirations than students of African origin not speaking Spanish, or other official languages, regularly at home:

*Hypothesis 3:* In line with the information bias thesis, having parents who speak an official Spanish language at home leads student of African origin to lower college aspirations than students of African origin not speaking an official Spanish language at home.

## 4. Data and methods

### 4.1 Data and sample selection

We use data from the 2010-GEED. This survey was carried out by the National Institute of Educational Evaluation (INEE) for a representative sample of the student population at second grade of compulsory lower-secondary education (ESO), with an average age of 14 (GEED 2011). The sample was stratified by regions and schools ( $n = 870$ ), including a total of 27,032 students with valid information, and a response rate of 86%.

Table 1 describes the cases missing and excluded from our three ethnic groups of study on the main variables of analyses. We focus on three demographic groups: (1) Spanish origin (either one or both parents were born in Spain); (2) African origin<sup>5</sup> (both parents were born in an African country); (3) Latin American origin<sup>6</sup> (both parents were born in a Spanish-speaking Latin American country). We excluded 698 cases without information on the country of birth of either the mother or the father<sup>7</sup>; the cases of children with parents from European origin<sup>8</sup> (a diverse group from various regions) (593); other countries and regions (e.g., Asia, Australia, Brazil, and the United States) (254); and a mixture of parents from two different migrant groups (82). This left us with 26,334 observations for those students with Spanish-born parents (24,205), African parents (508) and Latin American parents (1,621).

Overall, among the 26,334 observations with identified ethnic origin, 14% of cases had missing responses in at least one of our variables of interest. Missing data affected minorities particularly, as is unfortunately common in studies on ethnicity: 3,183 cases of pupils of Spanish origin (13.2%), 156 of the African group (30.7%), and 340 of Latin American background (20.9%). Minorities showed a higher likelihood of not answering the question on educational aspirations (3.7% of total cases). The majority of missing cases were on academic scores (7% of total cases), which are difficult to impute for being standardized tests containing different items, affecting minorities to a higher extent than students of Spanish origin.

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<sup>5</sup> 84% were of Moroccan origin.

<sup>6</sup> The GEED-2010 survey does not differentiate between subregions in Latin America, so we had to lump together different country nationalities with different socioeconomic profiles and migration histories (Aparicio 2007). We excluded the group of Brazilian minorities, as we concentrated only on Spanish-speaking Latin American groups. Within Latin American migrants, Ecuadorians account for the greatest share, followed by Colombians, Bolivians, Peruvians, and Argentinians (INE 2010).

<sup>7</sup> This group of missing cases on ethnic origins is negatively selected in terms of socioeconomic background and academic performance.

<sup>8</sup> Even though the migrant group of Romanians is among the largest migrant groups in Spain, unfortunately, its small sample size (less than 100 observations with valid information in all variables of interest) motivated its exclusion from the empirical analysis.

We followed a twofold exclusion criteria to select the analytic sample. First, among the sample with identified ethnic origin ( $n = 26,334$ ), we excluded those cases with missing values on at least one of the variables of interest ( $n = 3,679$ ; 14%). Second, we excluded those cases expressing uncertain educational aspirations (response category ‘don’t know yet’) ( $n = 3,858$ ; 14.7%). This second criteria brought us to exclude 14.3% of pupils of Spanish origin who reported not yet knowing which educational level they aspired to, a category with higher incidence of children of Latin American migrants (18.1%), and those with African-born parents (20.1%). Additional multinomial analyses showed robust results when including these excluded cases as a response category in the main analyses on educational aspirations (see Appendix, Table A-1).

**Table 1: Sample selection procedure by ethnic origin**

Variables	Overall Sample ( $n = 19,293$ )		Spain ( $n = 17,967$ )		Africa ( $n = 280$ )		Latin America ( $n = 1,046$ )	
	n Missing	% Missing	n Missing	% Missing	n Missing	% Missing	n Missing	% Missing
Age	0	0	0	0	0	0	0	0
Sex	155	0.59	136	0.56	4	0.79	15	0.93
Age on arrival	252	0.96	149	0.62	38	7.48	65	4.01
Language at home	0	0	0	0	0	0	0	0
Academic scores (Z-tests)	1,832	6.96	1,628	6.73	49	9.65 *	155	9.56 *
Grade retention	0	0	0	0	0	0	0	0
Single parent	297	1.13	247	1.02	20	3.94 *	30	1.85 *
Aspirations	4,832	18.35	4,320	17.85	143	28.15	369	22.76
Missing	974	3.70	857	3.54	41	8.07 *	76	4.69 *
Don't know	3,858	14.65	3,463	14.31	102	20.08 *	293	18.08 *
ESCS index	0	0	0	0	0	0	0	0
Parental work	505	1.92	432	1.78	23	4.53 *	50	3.08 *
School	0	0	0	0	0	0	0	0
Month of birth	142	0.54	126	0.52	9	1.77 *	7	0.43
Overall sample	26,334	100	24,205	100	508	100	1,621	100
Missing cases	3,679	13.97	3,183	13.15	156	30.71	340	20.97
Excluded cases	7,041	26.74	6,238	25.77	228	44.88	575	35.47
Analytic sample	19,293	73.26	17,967	74.23	280	55.12	1,046	64.53

Note: \*  $p < .05$  (t-test differences in reporting missing information or being excluded from the sample between each of the two minority groups and the Spanish origin group).

Following this twofold exclusion criteria we applied list-wise deletion. Our analytic sample includes a total of 19,293 cases, divided into students of Spanish origin ( $n = 17,967$ ; 25.8% excluded), African origin ( $n = 280$ ; 44.9% excluded), and Latin American origin ( $n = 1,046$ ; 35.5% excluded). To provide an illustration on how

representative the African and Latin American origin groups in the analytic sample are relative to the overall and excluded samples, Table S-1 in the online appendix shows the distributions of the variables of interest for each sample selection by ethnic groups. The variables' distribution in the analytic sample is highly consistent with the overall sample distribution before applying list-wise deletion. However, it should be noted that given the negative selection of the excluded sample, the overall analytic sample is slightly more likely to be of Spanish origin (around +2%). Furthermore, students of Spanish, African, and Latin American origin are, to a similar extent, slightly more prone to be distributed in more advantaged socioeconomic backgrounds (around +0.10 SD units), higher academic performance (around +0.10 SD units), and to be women (around +3%), so leading to slightly higher (around +3%) college aspirations. We acknowledge this small selection bias. Yet, given the high similarity in the variables' distributions between the overall and analytic samples, we decided not to impute missing cases, and to apply list-wise deletion instead (Portes et al. 2013). We assume that results might show conservative estimates in case of producing significant statistical effects (Allison 2002; Firebaugh 2008).

#### **4.2 Dependent variable**

The dependent variable is a dummy measure that identifies whether adolescents aspire to achieve college education (1=yes) or lower levels of education (0=no). This measure is constructed from the following question, which includes different educational aspirations: "Which of the following levels of education do you want to complete?" We conduct as robustness checks additional analyses on the incidence of uncertainty (response category 'don't know yet') in aspirations (see Appendix, Table A-1), and on the probability of aspiring to post-compulsory vocational education, as opposed to academic tracks for different ethnic groups (see Appendix, Table A-2).<sup>9</sup>

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<sup>9</sup> Additional analyses were conducted for other samples with two alternative definitions of aspirations: (1) a multinomial model with three possible response categories: (i) less than college, (ii) college, or (iii) 'don't know yet'; and (2) opting for postcompulsory vocational education instead of an academic education (academic upper-secondary track or college) among those who aspire to postcompulsory education. First, Table A-1, in model 1, shows that students of African and Latin American origin are more prone to not knowing which educational level they aspire to than those with Spanish-born parents ( $p < .01$ ). Yet, such ethnic differences disappear when socioeconomic controls and measures of educational performance are simultaneously included in model 3. More detailed analyses show that students with migrant origins are more prone to aspire to college education than to uncertain aspirations and/or noncollege education in comparison to students of Spanish origin, controlling for socioeconomic background and academic performance. Moreover, migrant-origin students are more likely to express uncertain aspirations than to aspire to noncollege education in comparison to their Spanish-origin counterparts. These multinomial models include those cases excluded from the main analysis according to the second exclusion criteria (uncertain educational aspirations), so potentially controlling for the positive selection of the analytic sample, and providing



### 4.3 Independent variables

The main independent variable is ethnic status, a categorical variable with three specified subgroups: (1) Spanish origin (at least one parent born in Spain); (2) African origin (both parents born in Africa); (3) Latin American origin (both parents born in Spanish-speaking Latin American countries). Age on arrival is a categorical measure with four categories that depend on the age on arrival in Spain and ethnic status: (1) children of African migrants born in Spain – second-generation migrants – or arriving in Spain before primary education enrolment age – starting at age six – (1.75 generation or aged 0–5); (2) children of Latin American migrants born in Spain – second-generation migrants – or arriving in Spain before primary education enrolment age – starting at age six – (1.75 generation or aged 0–5); (3) children of African migrants arriving at primary- or secondary-school age (1.5 generation or aged 6–15); (4) children of African migrants arriving at primary- or secondary-school age (1.5 generation or aged 6–15). Language at home measures the language spoken by parents of African origin, dividing this group based on whether or not parents speak an official Spanish language regularly.<sup>10</sup>

To measure social background, we use the Economic, Social and Cultural Status (ESCS) index. This OECD index was created for PISA reports, used for the GEED-2010, by combining information on (1) parental occupation; (2) the highest level of parental education; (3) home possessions related to family wealth; and (4) home educational resources and possessions related to cultural environments (e.g., books, classical literature, cultural participation) (GEED 2011). This measure provides a parsimonious multidimensional index of social origin that better captures the full array of parental resources, minimizing missing information due to a standardized system of imputation in comparison to other single variables of social background (e.g., education, occupational class).

We use two measures on educational performance.<sup>11</sup> These measures potentially control for teachers' bias and other noncognitive factors, such as emotional readiness

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additional support to our main hypothesis on migrant optimism. Second, Table A-2 reveals that when only basic demographic controls are added, minority students with an African background show higher aspirations to vocational education as opposed to the academic track ( $p < .001$ ). However, when socioeconomic factors and, especially, academic performance are considered in the models, the two minority groups are considerably less prone to aspire to vocational education, compared to their counterparts of Spanish origin ( $p < .001$ ).

<sup>10</sup> It should be noted that 17% of students with African parents who speak Spanish at home arrived in Spain between the ages of 6 and 15 years old (1.5 generation), and 38% of students with African parents who do not speak Spanish at home did so.

<sup>11</sup> It would be ideal to test whether educational aspirations at  $t_0$  are met at  $t_{+1}$ ; unfortunately, to the best of our knowledge, Spain lacks longitudinal surveys to study educational trajectories and actual educational attainment.

and behavioural problems, as we use both standardized tests (academic scores) and a proxy for teacher-assigned or school grades (grade retention). Academic scores are a multiple index of educational performance based on combined standardized tests in four competence: <sup>12</sup> (1) linguistic, (2) mathematic, (3) scientific, and (4) civic-social competences. Grade retention is a dummy variable that differentiates between students who have experienced grade retention (yes=1) and those who have not experienced grade retention in their school trajectory (no=0).

We use different control variables. Male differentiates boys (1 = yes) from girls (0 = no). Month of birth is a dummy variable accounting for whether the pupil was born from September to December (1 = yes) or from January to August (0 = no). Private school is a dummy variable that differentiates between students who attend a school that is (fully or partly) privately funded (1 = yes) from those in a strictly publicly-funded school (0 = no). Single-parent household is a dummy variable that separates children living with one parent (1 = yes) from those living with two parents (0 = no). Parental employment status contains three categories: (1) two parents employed; (2) one parent employed; (3) no parent employed.

#### **4.4 Empirical strategy**

We follow different empirical steps: (1) We provide descriptive analyses on the distributions and associations of the main variables of interest. (2) We conduct different sets of binary logistic regression models predicting the probability of aspiring to college education, as opposed to not aspiring to college, under different model specifications. We run average marginal effects (AME) to compare the coefficients of ethnic groups across different models (Mood 2010). Model 1 is the basic model, including only demographic factors. Model 2 adds social background and other socioeconomic measures. Model 3 accounts for educational performance. (3) We explore interaction effects between ethnicity and (a) educational performance (Table A-3, models 3a and 3b), and (b) social background (Table A-3, model 3c). (4) We conduct two general full-models predicting college aspirations with AME, using two variations of ethnicity variables in each model, namely: (a) age on arrival in the country (model 4a and 4b) and (b) parents' language use (model 5).

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<sup>12</sup> We carried out a factor analysis to assess the reliability of our combined measure of standardized tests in four different academic competences. According to the Kaiser's criterion and the scree test (e.g., just one factor with eigenvalue above 1), these four measures of educational performance can be aggregated in one underlying dimension of competences ( $\alpha = 0.8$ ).

## **5. Findings**

### **5.1 Descriptive analyses and distributions**

Table 2 shows the summary statistics with means and standard deviations (SD) for all our variables of study. There are interesting descriptive differences in Table 2 that can be summarized in six levels. First, ethnic status is negatively related to standardized academic scores: students of African background are located almost one standard deviation unit below students of Spanish origin, while Latin American students are – 0.36 standard deviation units below students of Spanish origin. Similarly, the incidence of grade retention is two times larger for ethnic minorities (African, 49.3%; Latin American, 41.3%) than for those of Spanish background (21%). Second, 66% of students aspire to achieve college education in the future. The children of Spanish-born parents have the highest aspirations of obtaining a college degree (67%), followed by students of Latin American origin (63%), while the lowest are those whose parents are African migrants (51%). Third, within minorities, adolescents of African origin are found to the greatest extent among those born in Spain (2.0 generation) or those who arrived in Spain before starting formal primary school (66%); the highest share of students who arrived in Spain at primary- or secondary-school age is found in children with parents migrating from Latin America (64%). Fourth, 21% of children of African origin are raised in a Spanish-speaking home, compared to 79% living in a home where parents mainly speak other languages (e.g., Arabic). Fifth, children from a Latin American background, and particularly those of African origin, are disadvantaged in their social origin (ESCS index at –0.95 SD units for Africans, and –0.36 SD units for Latin Americans in comparison to the Spanish majority), access to privileged schools (private education), and parents' employment access (e.g., living in a jobless household). Sixth, and last, children from Latin American backgrounds are overrepresented in single-parent families (30%), while in this regard those of African origin (16%) resemble very much their counterparts of Spanish origin (13%).

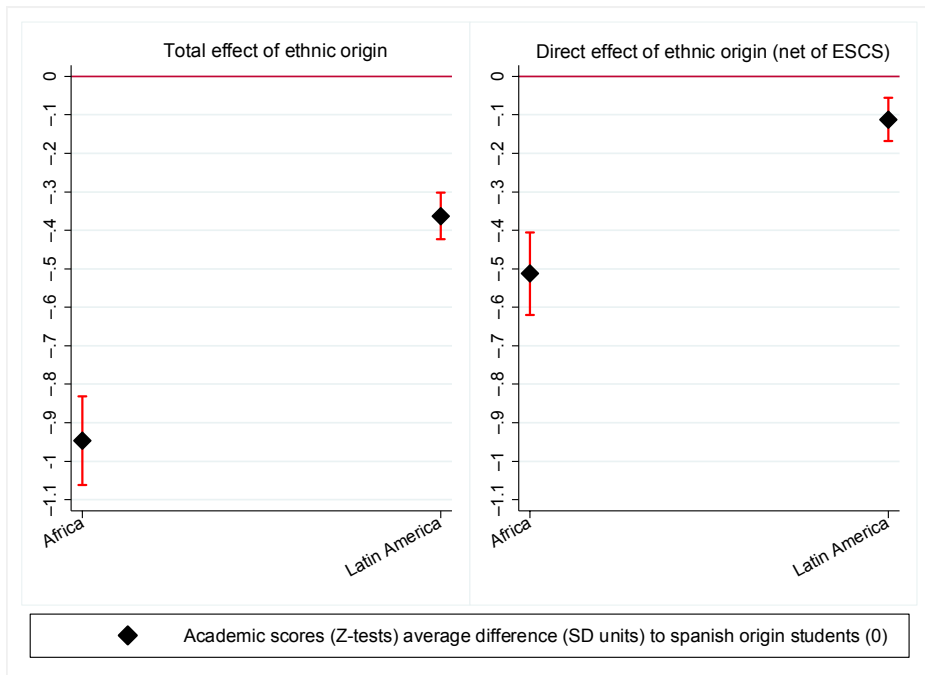
**Table 2: Summary statistics: Means and standard deviations (analytic sample)**

Variables	Overall sample		Spanish origin		African origin		Latin American origin	
	Mean	SD	Mean	S.D.	Mean	SD	Mean	SD
Age	14.29	0.64	14.27	0.62	14.8 *	0.83	14.59 *	0.79
Month of birth: Sept.–Dec.	33.64		33.75		26.07 *		33.75	
Male	48.84		48.92		45.00		48.47	
Spanish origin	93.13							
African origin	1.45							
Latin American origin	5.42							
2.0 or arrival at ages 0–5	2.89				66.07 *		35.56 *	
1.5 or arrival at ages 6–15	4.89				33.93 *		64.43 *	
African (Spanish language)	0.31				21.07			
African (Other language)	1.15				78.93			
Aspirations to college	66.49		66.92		51.07 *		63.19 *	
Privately-funded school	36.01		37.16		5.71 *		24.47 *	
Single-parent family	14.43		13.46		16.43		30.50 *	
Two parents employed	60.03		60.83		19.64 *		57.07 *	
One parent employed	35.20		34.73		56.79 *		37.48 *	
No parent employed	4.77		4.44		23.57 *		5.45 *	
ESCS index	0.12	1.00	0.17	0.99	–0.95 *	0.93	–0.47 *	0.89
Grade retention	22.50		20.99		49.29 *		41.3 *	
Academic scores (Z-tests)	0.11	0.98	0.15	0.98	–0.80	0.93	–0.22	0.90
<b>n</b>	<b>19,293</b>		<b>17,967</b>		<b>280</b>		<b>1,046</b>	

Note: \* p < .05 (t-test differences).

Figure 3 builds upon our analytical framework (summarized in Figure 1) by breaking down the association between ethnic status, social background, educational performance, and educational aspirations in two steps. First, Figure 3 shows that once parental socioeconomic background is controlled for, the net effect of being an ethnic minority considerably declines. The indirect association between African minority status and average academic scores via ESCS accounts for 46% of the total association, while for the Latin American subgroup it accounts for 69%. Regarding grade retention, the association between African minority and grade retention is mediated by ESCS at 62.2% and at 47% for the Latin American minority. Therefore, the underperformance of ethnic minority groups seems to be partly accounted for compositional effects in terms of their overall disadvantaged socioeconomic background. The residual or direct effect of ethnic status on educational performance might be related to several unobserved factors such as cultural and/or linguistic barriers, social capital, residential segregation, discrimination, or other omitted variables.

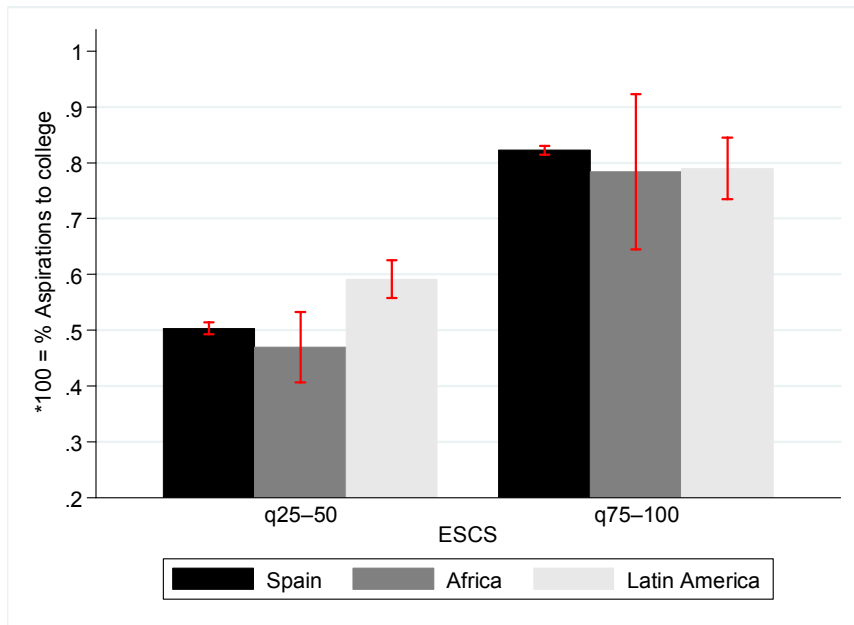
**Figure 3: Total and direct effect (net of ESCS) of ethnic origin on academic scores (Z-tests)**



Note: Standardized coefficients estimated from bivariate (ethnic origin) and multivariate (ethnic origin and ESCS) OLS linear regression models and average marginal effects. 95% confidence intervals; n = 19,293.

Second, Figure 4 and Figure 5 show whether compositional effects in the ESCS distribution by ethnic status might be associated with the observed gross differences in educational aspirations across ethnic groups. Figure 4 displays how, once ESCS is controlled for, Latin Americans aspire more to college than Spanish students, while African pupils display similar rates to the latter.

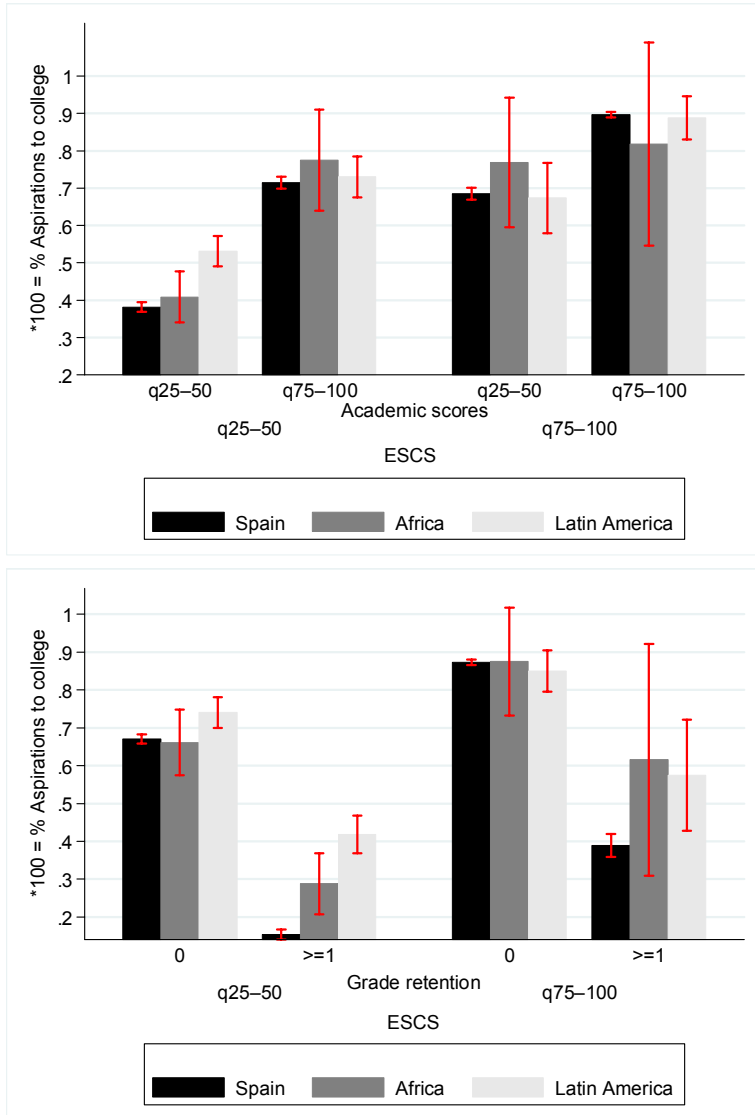
**Figure 4: Educational aspirations by ethnic origin and ESCS quartiles**



Note: 95% confidence intervals; n = 19,293.

Figure 5 shows that, on average, the aspirations of the two minority groups become larger than those of students with Spanish-born parents when ESCS and educational performance are controlled for. This would indicate compositional effects or suppressor variables (inconsistent mediation). That is, while initially lower (negative relationship), the net or direct effect of being an ethnic minority seems to lead to higher educational aspirations than for the national majority (positive relationship), keeping social background and educational performance constant. Finally, descriptive analyses reveal that differences in aspirations are concentrated at the bottom of the educational performance and ESCS distributions, suggesting moderation effects.

**Figure 5: Educational aspirations by ethnic origin, ESCS quartiles and academic performance (academic scores [Z-tests] quartiles and grade retention)**



Note: 95% confidence intervals; n = 19,293.

## **5.2 Multivariate statistical analyses**

### **5.2.1 Migrant optimism: Selection**

Table 3 shows the multivariate logistic models for college aspirations. Model 1 shows that compared to children of Spanish origin the probability of aspiring to college is 17% lower for students of African origin ( $p < .001$ ), and 4% lower for those from a Latin American background ( $p < .05$ ). Model 2 shows that after accounting for socioeconomic background the probabilities of aspiring to college, compared to the reference of Spanish origin, become positive for the two minority groups, shifting to a 6% higher probability for children of African origin ( $p < .05$ ), and 8% for those with a Latin American background ( $p < .001$ ). In model 3 when we account for heterogeneity in educational performance, the positive association of minority groups with aspirations becomes even larger, with 12% higher probabilities of aspiring to college ( $p < .001$ ).<sup>13</sup> The results yielded by model 1 resemble evidence for Barcelona and Madrid (Portes et al. 2013), showing that minority students have lower educational aspirations than the national majority. Yet, in line with studies for the Spanish region of Navarra (Cebolla-Boado and Martínez de Lizarrondo 2015) and other countries (Salikutluk 2016), minorities seem to have lower (gross) aspirations than students of Spanish origin because of their disadvantaged background and educational performance.

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<sup>13</sup> The total effect of ethnic status is lower than the direct effect, net of socioeconomic background, and educational performance, and the direction of the coefficients change from negative to positive. Thus, we are dealing with suppressor variables and inconsistent mediation, which is why we cannot report substantive mediation coefficients.



**Table 3: Binary logistic models (average marginal effects) on aspirations to college education**

	Model 1		Model 2		Model 3	
	AME	Std. err.	AME	Std. err.	AME	Std. err.
Spanish origin (ref.)						
African origin	-0.167 ***	0.030	0.056 *	0.022	0.125 ***	0.017
Latin American origin	-0.038 *	0.015	0.078 ***	0.012	0.116 ***	0.010
Born in September–December	-0.025 ***	0.007	-0.018 **	0.007	0.006	0.006
Male	-0.154 ***	0.007	-0.153 ***	0.006	-0.120 ***	0.006
Private school			0.069 ***	0.007	0.033 ***	0.006
Single-parent household			-0.069 ***	0.009	-0.019 *	0.008
Two employed parents (ref.)						
One employed parent			-0.017 **	0.007	-0.008	0.006
Unemployed parent			-0.035 *	0.015	-0.003	0.013
Economic-social-cultural status index			0.157 ***	0.003	0.080 ***	0.003
Grade retention: ≥ one year					-0.339 ***	0.009
Academic scores (Z-tests)					0.099 ***	0.003
Pseudo R <sup>2</sup>	0.023		0.148		0.297	
n	19,293		19,293		19,293	

Note: \*\*\*  $p < .001$  \*\*  $p < .01$  \*  $p < .05$  +  $p < .10$ ; AME = average marginal effects (with standard errors in second column).

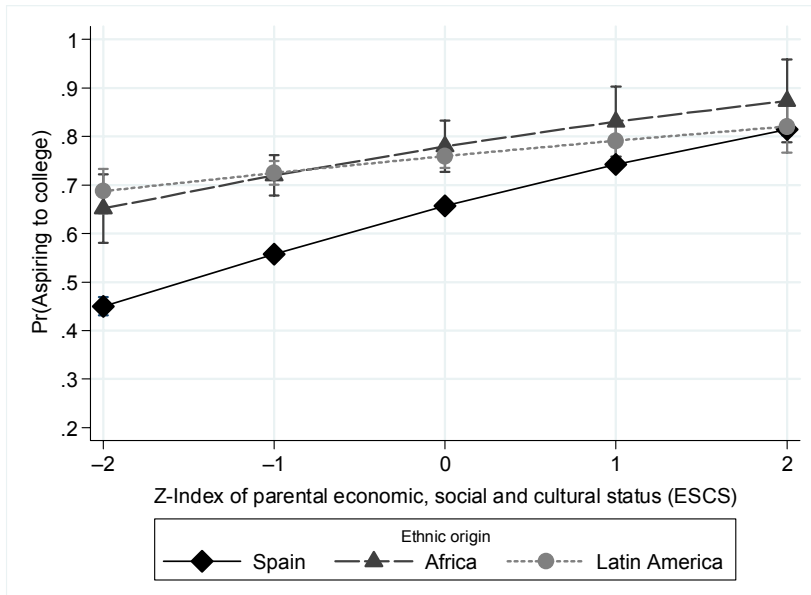
### 5.2.2 Moderation effects: Socioeconomic status and educational performance

We conduct two types of interaction effects models that predict aspirations to college education with logistic models.<sup>14</sup> Figure 6 shows the predicted probabilities of aspiring to college from a model with an interaction effect between ethnicity and the ESCS index. This model (see also Appendix, Table A-3, model 3c) includes all the main independent and control variables of the study. This interaction effect shows that differences in aspirations of minorities of both African and Latin American origin, in comparison to the Spanish majority, are larger in the most disadvantaged families. These gaps are especially visible for students of Latin American background. We see that at higher levels of the ESCS index the ethnic gap in aspirations tends to vanish. In

<sup>14</sup> As pointed out by an anonymous reviewer, the group of children of African origin had a relatively small sample size, especially for the subgroup of high-performing and more privileged students. This raises doubts about whether there is enough statistical power to observe significant moderation effects by academic scores and social background among students of African origin (as shown in appendix, Table A-3, model 3c, the magnitude of the interaction effect between the ESCS index and students of African origin is similar to students of Latin American origin, but only the latter is statistically significant), and/or whether any potential moderation effects could be driven by outliers within this group.

short, Figure 6 shows that ESCS index is a stronger predictor of aspirations for students with Spanish parents than it is for ethnic minorities.

**Figure 6: Predicted probabilities of college aspirations. Interaction effects for ethnic origin and economic, social, and cultural status index (ESCS)**



Note: The interaction effect for the Latin American group is statistically significant at  $p < .001$ , while for the African group it is not statistically significant (see Appendix, Table A-3, model 3c);  $n = 19,293$ .

Figure 7 shows the predicted probabilities of aspiring to college education from the interaction effects models between ethnicity and two indicators of educational performance: (1) standardized test scores (see also Appendix, Table A-3, model 3a); and (2) grade retention (see also Appendix, Table A-3, model 3b). The models include all the main independent and control variables of the study. Figure 7, in the top graph, shows how both ethnic minority groups have higher aspirations to college than the Spanish majority across the test scores distribution, and that for the children of Latin American, this difference is concentrated in the group of low-performing students. In other words, the Latin American minority is less sensitive to its educational performance in the expressed educational aspirations, while for African and Spanish students educational performance is more predictive. Figure 7, in the bottom graph, shows that adolescents with parents from the Spanish majority present levels of college

aspirations that are more (negatively) associated to grade retention, as compared to pupils of ethnic minority groups. Indeed, even though grade retention is the main predictor of later school dropout in Spain (Bernardi 2012), experiencing it at school among the children of African and Latin American origin does not imply a considerable reduction in the probability of desiring attending college education in comparison to their counterparts with Spanish-born parents.<sup>15</sup>

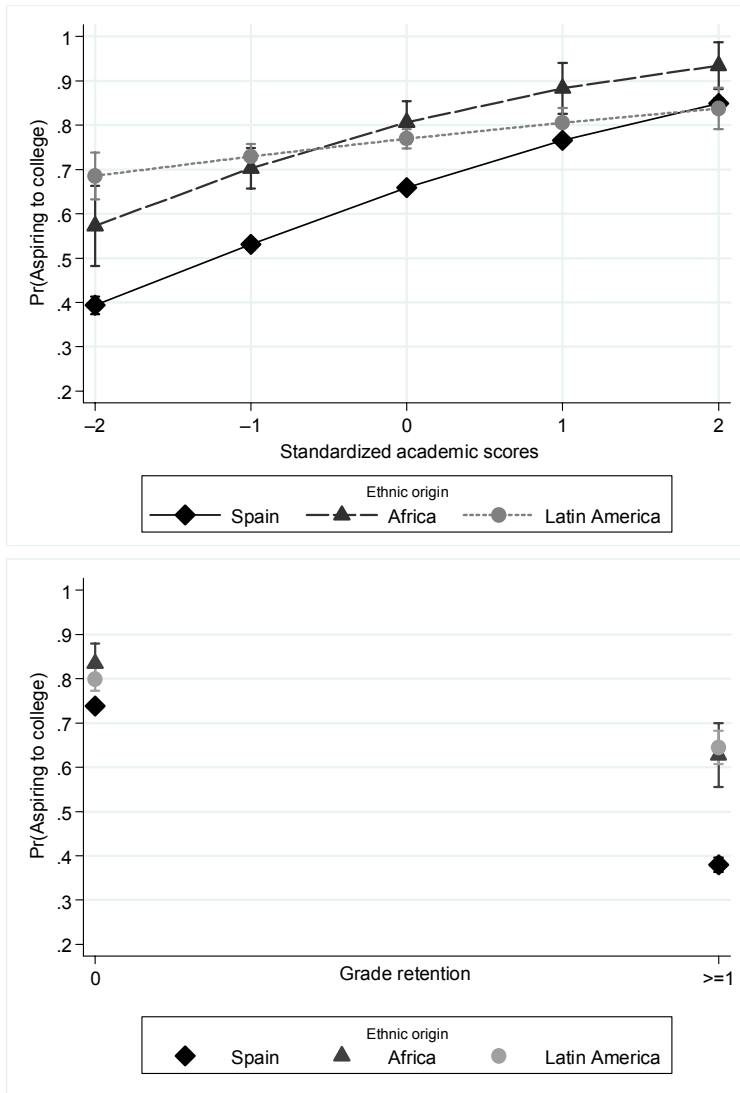
### **5.2.3 Ethnic-related determinants of educational aspirations**

Table 4 presents the AME for two additional models on two potential sources of ethnic variation: (1) age on arrival within ethnic subgroups, and (2) parents' language use. In model 4a we observe that in comparison with the group of second-generation African migrants or children of African migrants who arrived in Spain before primary school (aged 0–5), African children who arrived at primary- or secondary-school age (aged 6–15) have lower probabilities of aspiring to college education (–7%), even if the significance level is at 10%. Model 4b shows that in comparison with the group of second-generation Latin American migrants or children of Latin Americans who arrived in Spain before primary school (aged 0–5), Latin American children who arrived at primary- or secondary-school age (aged 6–15) have slightly higher probabilities of aspiring to college education (+3%). Yet, this difference is not statistically significant. As for the parents' language use, Table 4, model 5 does not yield any meaningful or significant difference between children of African origin whose parents speak regularly Spanish at home and those whose parents do not speak Spanish regularly at home.

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<sup>15</sup> As a robustness check, Figure A-1 (See Appendix) shows that, when accounting for the potential (positive) association between age on arrival and grade retention, the high college aspirations of minorities who experienced grade retention remain across age on arrival.

**Figure 7: Predicted probabilities of college aspirations. Interaction effects for ethnic origin and educational performance**



Note: Models control for all the variables included in the study (95% C.I. included). For academic scores (top graph), the interaction effect for the Latin American group is statistically significant at  $p < .001$ , while for the African group it is not statistically significant (Table A-3, model 3a). For grade retention (bottom graph), the interaction effect is statistically significant at  $p < .001$  for the Latin American group, and  $p < .05$  for the African group (Table A-3, model 3b).  $n = 19,293$ .

**Table 4: Binary logistic models (AME) on aspirations to college education**

	Age on arrival		Language at Home			
	Model 4a		Model 4b		Model 5	
	AME	Std. err.	AME	Std. err.	AME	Std. err.
Age on arrival						
2.0 or arrival at 0–5/African	(ref.)		0.054*	0.025		
2.0 or arrival at 0–5/Latin American	–0.054*	0.025	(ref.)			
Spanish–Native origin	–0.148***	0.019	–0.094***	0.017		
1.5 or arrival at ages 6–15/African	–0.066 <sup>+</sup>	0.036	–0.012	0.035		
1.5 or arrival at ages 6–15/Latin American	–0.023	0.022	0.031	0.020		
Parents' language spoken at home						
African-born parents: Spanish					(ref.)	
Spanish-born parents					–0.133***	0.034
Latin American-born parents					–0.017	0.035
African-born parents: Other languages					–0.010	0.039
Born in September–December	0.006	0.006	0.006	0.006	0.006	0.006
Male	–0.120***	0.006	–0.120***	0.006	–0.120***	0.006
Private school	0.032***	0.006	0.032***	0.006	0.033***	0.006
Single-parent household	–0.018*	0.008	–0.018*	0.008	–0.018**	0.008
Two employed parents	(ref.)					
One employed parent	–0.008	0.006	–0.008	0.006	–0.008	0.006
Unemployed parent	–0.002	0.013	–0.002	0.013	–0.002	0.013
Economic-social-cultural status Index	0.080***	0.003	0.080***	0.003	0.080***	0.003
Grade retention: ≥ one year	–0.340***	0.009	–0.340***	0.009	–0.340***	0.009
Academic scores (Z-tests)	0.099***	0.003	0.099***	0.003	0.099***	0.003
Pseudo R <sup>2</sup>	0.297				0.297	
n	19,293				19,293	

Note: \*\*\*  $p < .001$  \*\*  $p < .01$  \*  $p < .05$  +  $p < .10$ ; AME = average marginal effects (with standard errors in second column).

## 6. Discussion

This study uses data from the 2010-GEED to analyse the educational aspirations of adolescents of African and Latin American origin in Spain. The case of African and Latin American minorities in Spain – a relatively new immigration country – is particularly interesting in a country in which migration from Africa, and especially Latin America, increased dramatically from the mid-1990s until the 2008 Great Recession (Mooi-Reci and Muñoz-Comet 2016). Two studies, to our knowledge, have used Spanish data to analyse ethnic differences in educational aspirations (Portes et al. 2013; Cebolla-Boado and Martínez de Lizarrondo 2015). These studies focused on two different regions, yielded generally mixed and contradictory results, and only one

controlled for educational performance (Cebolla-Boado and Martínez de Lizarrondo 2015), a critical variable to measure ethnic differentials in educational aspirations (Salikutluk 2016). Our study addresses ethnic differences in educational aspirations by looking at three key domains (selection, moderation, and variation within minorities) with representative data on the Spanish educational system to answer our research questions.

We developed different hypotheses that we tested empirically. We found support for Hypothesis 1a on selection or compositional effects, namely that ethnic minorities have higher net educational aspirations than their counterparts with native-born parents. On average, without controlling for social background, minority pupils in Spain have lower chances of aspiring to college education than students with Spanish-born parents. Yet, when accounting for family background, and especially for educational performance, we found higher probabilities (around 12% higher) of aspiring to college among minority students in comparison to students with Spanish-born parents. This result suggests that the migrant optimism thesis holds for the Spanish population, consistent with Cebolla-Boado and Martínez de Lizarrondo's (2015) study on the region of Navarra.

We found partial support for Hypothesis 1b, which stated that the association between parental socioeconomic status and educational aspirations is stronger for students of Spanish origin than it is for students of African and Latin American background. Results show that parental socioeconomic and cultural status is less predictive of educational aspirations for ethnic minority groups, especially so for Latin Americans. The largest differences in educational aspirations between ethnic minorities – especially those with Latin American migrant parents – and students with Spanish-born parents can be found among families with lower socioeconomic and cultural resources. These results suggest that disadvantaged ethnic minorities, probably because of having ambitions of (upward) social mobility (Salikutluk 2016) and strong motivation (Kao and Tienda 1995), seek to overcome their underprivileged origin by transmitting high educational aspirations to their children. In line with Feliciano and Lanuza (2017), we need to consider that migrant families are a positively selected group that is usually over-skilled, so instead of seeking long-range upward mobility, minority families might just be trying to obtain those positions that they were supposed to get in the first place based on their former socioeconomic status in their origin country. Additional analyses suggest that Latin American families have similar levels of education to Spanish ones,<sup>16</sup> but reveal a high rate of over-qualification and under-employment (Kraus and Castro-Martín 2017; Vidal-Coso and Miret-Gamundi 2014).

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<sup>16</sup> Kraus and Castro-Martín (2017) indicate that fathers, and especially mothers, of the 1.5 Ecuadorian generation who migrated to Spain are a positively selected group with higher educational attainment than their Ecuadorian counterparts who did not migrate outside Ecuador.

We do not find similar patterns and differences for African migrants, possibly linked to their more modest socioeconomic profile (Aparicio 2007). This tentative evidence may drive the observed differences between ethnic minorities. Future research with precise data in this direction should further investigate the role of ambitions and positive selection in shaping ethnic differences in aspirations across socioeconomic groups and specific minority groups.

We also found support to Hypothesis 1c, which stated that the association between educational performance and educational aspirations is stronger for students of Spanish origin than it is for students of African and Latin American background. We found that among those minority children who experienced grade retention, pupils of Latin American background as well as pupils from African background do not adjust their high educational aspirations downwards, while it is the case for the Spanish majority. These results are solid after controlling for the positive relationship between age on arrival and grade retention. Regarding standardized test scores, we found that Latin Americans' performance is not as steeply associated to aspirations as it is for the Spanish majority, as low-performers from Latin American origin show high aspirations.<sup>17</sup> Thus, Hypothesis 1c also suggests that minority students display intrinsic optimism and (upward) social mobility ambitions regardless of constraints.

Concerning potential determinants of aspirations within ethnic groups, we anticipated in Hypothesis 2 that minority students who recently arrived in Spain during primary or secondary education have higher educational aspirations than those who were born in or arrived in Spain before starting primary education. Results do not give support to this hypothesis. We found that minority students who arrived in Spain at primary- or secondary-school age (aged 6–15) do not generally show higher educational aspirations than second-generation minority students or those who arrived before starting formal primary school (aged 0–5). While Africans arriving in Spain as 6–15-year-olds show lower aspirations (–7%) than their 2.0 generation counterparts (significance level at 10%), Latin Americans express slightly higher aspirations (+3%), though not statistically significant. This result suggests that recently arrived minorities do not have a significantly stronger motivation than the children of migrants socialized entirely in the Spanish schooling system. This might imply that there are intrinsic high educational aspirations and optimism among minorities regardless of their time of exposure to the host country. These negligible differences by age on arrival are in line with previous studies (Minello and Barban 2012; Portes et al. 2013), yet these studies –

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<sup>17</sup> It could be argued that the moderation effects found in Hypothesis 1b and Hypothesis 1c could be just artifacts due to the overrepresentation of ethnic-minorities at the bottom of the socioeconomic and educational performance distributions. However, given the strong interaction effects for the Latin American group, which is more advantaged than the African group, we interpret these effects as theoretically substantive.

unlike ours – did not account for heterogeneity in educational performance by age on arrival.

The last expectation was presented in Hypothesis 3. It anticipated that having parents who speak an official Spanish language leads children of African origin to lower educational aspirations in comparison to children of African origin who speak Arab or other foreign languages at home. We did not find support for this hypothesis. We did not observe any meaningful and/or significant difference between children of African origin whose parents speak Spanish and those whose parents do not speak Spanish at home. It should be noted that the group of students with Spanish-speaking African parents was relatively small, and our measures did not include rich information on parental proficiency in Spanish or bilingualism. Our results resemble those from Portes et al. (2013) for Barcelona and Madrid in finding no effects of parental language on educational aspirations. Future studies should provide more precise information on how the use of the official national language among migrant families leads to differences in access to valuable information to navigate the educational system.

Overall, our study implies that the migrant optimism hypothesis holds in Spain, as in recent work on other European countries, like the study of Fernández-Reino (2016) on England and Salikutluk (2016) on Germany. We found that after accounting for the disadvantaged socioeconomic status and educational performance of Latin American and African students, they show higher aspirations than the Spanish majority. Furthermore, socioeconomic background and educational performance are less predictive of educational aspirations for ethnic minorities than for students of Spanish origins. The higher educational aspirations of minorities are concentrated among disadvantaged students in social background and educational performance, so suggesting high intrinsic motivation and (upward) social mobility ambitions. This interpretation is further supported by the inconclusive evidence on the role of age on arrival in Spain, and language use at home, used as tentative proxies of acculturation and information bias. Furthermore, the fact that Latin Americans, an ethnic-group that is very close in many respects to students of Spanish origin in terms of language and culture, showed higher aspirations can serve as an indirect test against the information bias and acculturation hypotheses.

Our findings have mixed implications regarding the life chances and integration of minority adolescents in Western societies. On the one hand, the high educational aspirations of minorities is a sign of hope in terms of high motivation, an important condition for success in the educational system (Portes, McLeod, and Parker 1978). On the other hand, high levels of aspirations among disadvantaged minorities can lead to future disillusion, frustration, or conflicts in their life course development, due to an imbalance between their dreams and their actual chances of achievements at later stages of the life course (Butler and Hamnett 2011; Jacob and Wilder 2011). This reality



clearly applies to the children of migrants in Spain (including those from African and Latin American backgrounds), who tend to have lower chances of accessing college education than those of Spanish origin (Miyar Busto 2017). Future studies should analyse the potential consequences of this apparent contradiction in minority pupils' aspirations and actual educational chances (i.e., transition rates to academic upper-secondary education controlling for performance and aspirations, or secondary effects; see Jonsson and Rudolphi 2011).

We finish this study by acknowledging several limitations that should be addressed in future studies. First, many important variables were unfortunately not available in our data, such as potential discrimination (i.e., blocked opportunities hypothesis), educational expectations, actual educational attainment, or social mobility goals. Salikutluk's (2016) study with German data is quite exceptional in this respect, as she had access to direct measures on social mobility improvement. We believe that an analytical approach that takes into account the socioeconomic gradient in the aspirations of ethnic minority groups, and objective measures on social mobility goals and motivation for parents and children will shed more light on the migrant optimism hypothesis in the Spanish context. Second, precise measures of language use at home and actual family access to information on the schooling system would surely allow us to better understand processes related to ethnic differences in educational aspirations. Third, our data lacked precise good quality measures on the degree to which minority children are integrated in the society, irrespective of the time they have resided in the host society. Fourth, we have to be cautious in interpreting some results based on sample selection or group size for our ethnic minority groups of study. Ethnic minority groups were more likely to report missing values in some of our key variables of interest, as well as to express uncertain aspirations. The group of children of African origin had, especially for the subgroup of high-performing and more privileged students, a relatively small sample size. This brings us to be conservative in the discussion of the moderation analysis, and to call for additional studies that oversample these ethnic groups. Fifth, and finally, we believe that further research using a cross-country and multilevel comparative approach, as well as in-depth interviews and ethnographies, could significantly improve our understanding on the mechanisms driving the aspirations of ethnic minority groups in contemporary industrialised countries. Overall, we hope that our study, and the limitations of our work that we have just outlined, will inspire future scientific debates and research on ethnic differentials in students' aspirations.

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## Appendix

**Table A-1: Multinomial logistic models (AME) on educational aspirations**

Outcome	Model 1		Model 2		Model 3	
	AME	Std. err.	AME	Std. err.	AME	Std. err.
<b>Born in September–December</b>						
<College	0.020 **	0.006	0.014 *	0.006	-0.004	0.005
College	-0.024 **	0.007	-0.016 *	0.006	0.006	0.006
Don't know yet	0.003	0.005	0.002	0.005	-0.002	0.005
<b>Male</b>						
<College	0.123 ***	0.006	0.125 ***	0.006	0.101 ***	0.005
College	-0.148 ***	0.007	-0.151 ***	0.006	-0.124 ***	0.006
Don't know yet	0.025 ***	0.005	0.026 ***	0.005	0.023 ***	0.005
<b>African origin</b>						
<College	0.113 ***	0.026	-0.058 **	0.019	-0.115 ***	0.014
College	-0.173 ***	0.026	0.047 +	0.024	0.131 ***	0.020
Don't know yet	0.060 **	0.022	0.011	0.018	-0.016	0.015
<b>Latin American origin</b>						
<College	0.018	0.013	-0.071 ***	0.010	-0.105 ***	0.009
College	-0.056 ***	0.014	0.065 ***	0.012	0.111 ***	0.011
Don't know yet	0.038 ***	0.011	0.006	0.010	-0.006	0.009
<b>Private school</b>						
<College			-0.058 ***	0.006	-0.032 ***	0.006
College			0.061 ***	0.007	0.028 ***	0.006
Don't know yet			-0.002	0.005	0.004	0.005
<b>Single-parent household</b>						
<College			0.058 ***	0.008	0.022 **	0.007
College			-0.065 ***	0.009	-0.024 **	0.008
Don't know yet			0.007	0.007	0.002	0.007
<b>One employed parents</b>						
<College			0.015 *	0.006	0.007	0.006
College			-0.013 *	0.007	-0.005	0.006
Don't know yet			-0.002	0.005	-0.003	0.005
<b>Unemployed parent</b>						
<College			0.025 *	0.013	-0.001	0.012
College			-0.040 **	0.015	-0.010	0.014
Don't know yet			0.015	0.011	0.011	0.011
<b>Economic-social-cultural index</b>						
<College			-0.126 ***	0.003	-0.064 ***	0.003
College			0.162 ***	0.003	0.088 ***	0.003
Don't know yet			-0.036 ***	0.002	-0.023 ***	0.003
<b>Grade retention: ≥1 years</b>						
<College					0.276 ***	0.008
College					-0.308 ***	0.008
Don't know yet					0.032 ***	0.007
<b>Academic scores (Z-tests)</b>						
<College					-0.079 ***	0.003
College					0.106 ***	0.003
Don't know yet					-0.027 ***	0.003
Pseudo R <sup>2</sup>	0.0141		0.0925		0.1800	
n	22,655		22,655		22,655	

Note: \*\*\* p < .001 \*\* p < .01 \* p < .05 + p < .10 ; AME = average marginal effects (with standard errors in second column).

**Table A-2: Binary logistic models (AME) on aspirations to vocational training education**

	Model 1		Model 2		Model 3	
	AME	Std. err.	AME	Std. err.	AME	Std. err.
Spanish origin	(ref.)		(ref.)		(ref.)	
African origin	0.085 **	0.028	-0.020	0.018	-0.058 ***	0.014
Latin American origin	0.008	0.012	-0.042 ***	0.010	-0.067 ***	0.008
Born in September–December	0.008	0.006	0.006	0.006	-0.008	0.005
Male	0.087 ***	0.006	0.090 ***	0.005	0.073 ***	0.005
Private school			-0.026 ***	0.006	-0.013 *	0.006
Single-parent household			0.047 ***	0.008	0.016 *	0.007
Two employed parents			(ref.)		(ref.)	
One Employed parent			0.006	0.006	0.016	0.005
Unemployed parent			0.023 *	0.013	0.011	0.012
Economic-social-cultural status index			-0.070 ***	0.003	-0.038 ***	0.003
Grade Retention ( $\geq 1$ years)					0.233 ***	0.009
Academic scores (Z-tests)					-0.036 ***	0.003
Pseudo R <sup>2</sup>	0.0172		0.0719		0.1596	
n	17,431		17,431		17,431	

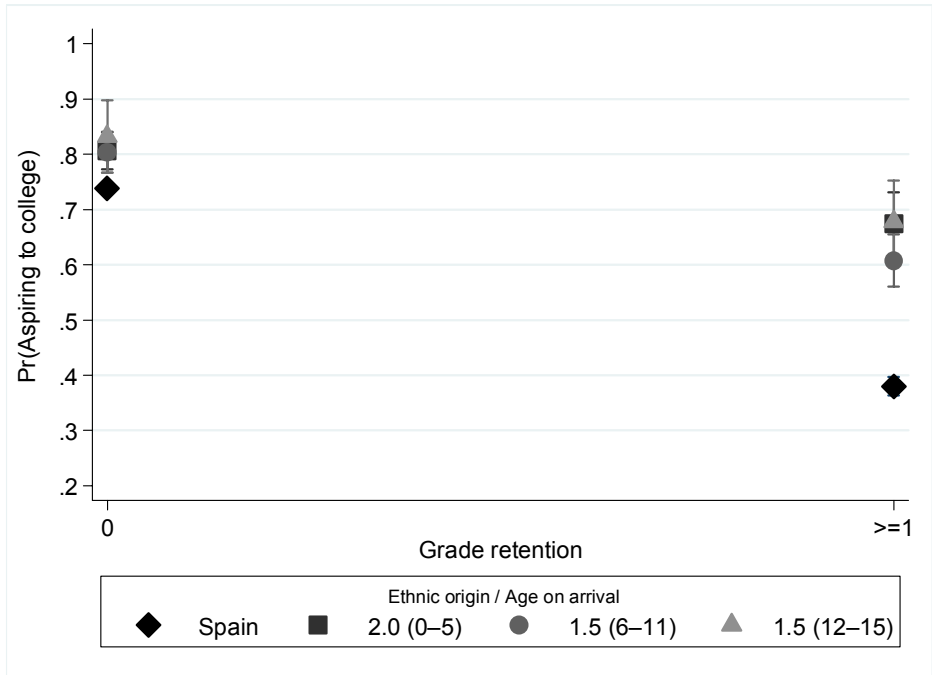
Note: \*\*\*  $p < .001$  \*\*  $p < .01$  \*  $p < .05$  +  $p < .10$ ; AME = average marginal effects (with standard errors in second column).

**Table A-3: Binary logistic models (odds ratio) on aspirations to college education: Interaction effects**

	Model 3a		Model 3b		Model 3c	
	Odds ratio	Std. err.	Odds ratio	Std. err.	Odds ratio	Std. err.
Spanish origin	(ref.)					
African origin	2.830 ***	0.591	2.046 ***	0.411	2.379 ***	0.517
Latin American origin	2.096 ***	0.182	1.533 ***	0.164	2.023 ***	0.199
Born in September–December	1.048	0.042	1.047	0.042	1.045	0.042
Male	0.441 ***	0.017	0.440 ***	0.017	0.441 ***	0.017
Private school	1.252 ***	0.053	1.252 ***	0.053	1.249 ***	0.053
Single-parent household	0.879 *	0.048	0.894 *	0.049	0.883 *	0.048
Two employed parents	(ref.)					
One employed parent	0.947	0.039	0.948	0.039	0.953	0.039
Unemployed parent	0.991	0.089	0.979	0.088	0.992	0.089
Economic-social-cultural status index (ESCS)	1.750 ***	0.039	1.747 ***	0.039	1.783 ***	0.042
Grade retention (≥ one year)	0.159 ***	0.007	0.144 ***	0.007	0.159 ***	0.007
Academic scores (Z-tests)	2.041 ***	0.050	1.988 ***	0.047	1.993 ***	0.047
Ethnic status × academic scores (Z-tests)						
Africa	1.005	0.183				
Latin America	0.654 ***	0.061				
Ethnic status × grade retention						
Africa			1.793 *	0.509		
Latin America			2.610 ***	0.404		
Ethnic status × ESCS						
Africa					0.876	0.144
Latin America					0.723 ***	0.069
Constant	4.423 ***	0.18	4.507 ***	0.184	4.408 ***	0.179
Pseudo R <sup>2</sup>	0.298		0.299		0.297	
n	19,293		19,293		19,293	

Note: \*\*\*  $p < .001$  \*\*  $p < .01$  \*  $p < .05$  +  $p < .10$ .

**Figure A-1: Predicted probabilities of college aspirations. Interaction effects for ethnic minorities' age on arrival and grade retention**



Note: Model controls for all the variables included in the study (95% C.I. included). The interaction effect is statistically significant at  $p < .01$  for all the ethnic minority subgroups (2.0 and 1.5 generations);  $n = 19,293$ .