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Research Article

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Abstract

BACKGROUND
As second generation grow up in Italy, understanding how academic expectations translate into actual university enrolment is crucial for assessing future integration prospects, labour market success, and social mobility.

OBJECTIVE
Adopting a longitudinal perspective, this study investigates the match or mismatch between students' academic expectations and subsequent university enrolment among students in their final year of Italian high school in 2015, focusing on differences by migrant generation and origin group.

METHODS
The analysis uses a unique dataset linking the 2015 Integration of the Second Generation survey conducted by the Italian National Institute of Statistics (ISTAT) to university enrolment records for the academic years 2015/2016, 2016/2017, and 2017/2018 from the Ministry of University and Research. Multinomial logistic regression models analyse the association between students' expectations–enrolment outcomes and migrant generation and origin group.

RESULTS
Results show that (1) among students with similarly positive academic expectations, migrant-origin students are less likely than their Italian classmates to enrol in university; (2) differences emerge by migrant generation; and (3) patterns across migrant groups are largely similar, with only limited exceptions.

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CONCLUSIONS
The findings reveal that migrant-origin students face greater difficulties in translating academic expectations into actual university enrolment, particularly among those who arrived in Italy at older ages, with similar variations by origin group.

CONTRIBUTION
By jointly analysing academic expectations and realised university enrolment, this study provides new national-level evidence on the (mis)match between expectations and outcomes among Italian and migrant-origin students, while also focusing on migrant generation and origin group. The findings highlight the importance of targeted support during the school-to-university transition to reduce mismatches between expectations and enrolment, particularly for migrant-origin students.

1. Introduction

Analysing the characteristics and educational outcomes of children of immigrants is crucial for three primary reasons. First, this population is expanding across destination countries (Crul, Schneider, and Lelie 2012). Second, understanding their integration patterns is essential for assessing the effectiveness of integration policies within host societies (Ambrosini 2011; Fleischmann et al. 2011; Ricucci 2010; Santelli 2001). Finally, the integration of immigrants and their children poses a pivotal challenge for policymakers, with a primary focus on education as the key avenue for upward social intergenerational mobility (Di Bartolomeo 2011).

As migrant populations settle in Italy and their integration pathways mature (Strozza, Conti, and Tucci 2021), it becomes increasingly important to monitor the transition of young people with migrant backgrounds into higher education. Analysing differences among migrant groups is particularly relevant in the context of ethnic stratification research, as it provides insight into future integration, labour market outcomes, and social mobility (Breen and Jonsson 2005; Heath, Rothon, and Kilpi 2008). Educational expectations play a central role in shaping students' educational choices and transitions (Orientale, Gargiulo, and Buonomo 2021), and comparing these expectations with actual enrolment outcomes can reveal potential mismatches between aspirations and realised educational opportunities, as well as weaknesses in school systems and broader inclusion processes.

In Italy, a substantial body of literature has explored the educational pathways of children of immigrants, especially in primary and secondary education (e.g., Azzolini, Mantovani, and Santagati 2019), focusing on differences between second-generation and native students. Other studies have explored various factors that contribute to

perpetuating potential disadvantages in educational outcomes (Ambrosetti et al. 2023; Sprietsma 2013; Triventi 2020; van Ewijk 2011).

However, there is limited statistical and demographic literature on migrant-origin students in Italian universities, particularly second-generation students. The few existing studies have primarily focused on microdata from single institutions (Belloc, Maruotti, and Petrella 2010; Giudici, Trappolini, and Vicari 2021), with rare analyses at the national level (Aiello, Attanasio, and Priulla 2020; Buonomo et al. 2024).

To our knowledge, only two studies have analysed academic expectations and university enrolment in Italy using national data (Buonomo et al. 2023; Di Patrizio, Trappolini, and Giudici 2023). Buonomo et al. (2023), based on descriptive statistics, report lower transition rates from high school to university among students with a migrant background compared to their Italian peers. Di Patrizio and colleagues (2023) analyse academic expectations and university enrolment separately and find that students with a migrant background tended to report higher academic expectations but lower university enrolment, with few differences by migrants' country of origin.

This study builds on and extends this literature by jointly analysing students' academic expectations and university enrolment, assessing whether similar academic expectations lead to different university enrolment outcomes for migrant-origin and Italian students. It focuses on the match or mismatch between academic expectations and subsequent university enrolment for these groups. For migrant-origin students, high academic expectations do not necessarily imply equal access to university, making the joint analysis of expectations and enrolment particularly informative.

Using a unique dataset that links survey data from the 2015 Integration of the Second Generation survey, conducted by ISTAT, to administrative records on university enrolment for the academic years 2015/2016, 2016/2017, and 2017/2018, this study investigates the academic expectations and university enrolment of students in their final year of Italian upper secondary school in 2015. This study has three specific aims. First, it examines the academic expectations and university enrolment of a cohort of students enrolled in their final year of Italian high school in 2015, by migrant background. Second, it moves beyond the binary migrant/Italian distinction by considering the migrant generation. Finally, it investigates differences by migrants' region/country of origin, offering a more nuanced understanding of the alignment between academic expectations and university enrolment across migrant backgrounds.

The paper is structured as follows: Section 2 outlines the Italian context concerning the migration phenomenon and the Italian high school and university system. Section 3 provides the international and national literature background and presents the research hypotheses. Section 4 describes the data and methods. Section 5 presents the results, and Section 6 concludes and discusses the policy implications of our findings.

2. The Italian context

2.1 The migrant population: size and composition

The increasing number of children of immigrants in the Italian education system reflects Italy's transition from a country of emigration to a destination country since the 1980s. The most significant increase occurred between the 1990s and the early 2000s, and then slowed down. The immigrant population residing in Italy was nearly 573,000 in 1992 (ISTAT 1998) and rose to approximately 1.5 million in the early 2000s, 4.2 million in 2010, and over 5 million in 2020 (ISTAT 2025a).

The absence of coherent migration policies has led to diverse and constantly evolving migrant groups. Europeans, Asians (mainly from the Philippines), Americans, and Africans (mainly from Tunisia, Morocco, and Senegal) were predominant in the 1980s. The 1990s were characterised by a greater diversification in the countries of origin compared to the previous decade. During this period, following the collapse of communist regimes, significant inflows arrived from Eastern Europe and the Balkans, particularly Romania and Albania. From the early 2000s onward, migrants from Central-Eastern Europe, especially Romania, became predominant (Colucci 2019).

Today, Italy hosts migrants from over 190 nationalities, though the composition of this population has changed significantly over time. In 2015, the top ten nationalities – Romanians (21.8%), Albanians (10.0%), Moroccans (9.7%), Chinese (5.0%), Ukrainians (4.4%), Filipinos (3.1%), Moldovans (3.0%), Indians (2.9%), Bangladeshis (2.3%), and Peruvians (2.2%) – accounted for 64% of all migrants. By 2024, the largest and most established groups remained Romanians (20.4%), Albanians (7.9%), Moroccans (7.9%), Chinese (5.9%), and Ukrainians (5.2%) (ISTAT 2025b).

Alongside labour-driven migration, family reunification flows have increased substantially.This shift has resulted in more arrivals of family members than of primary jobseekers, leading to the growth of immigrant and immigrant-origin families. A key outcome is the growth of immigrant families, families of immigrant origin, and the second generation – children born in Italy to immigrant parents – marking a decisive turning point in settlement processes (Buonomo, Strozza, and Vitiello 2018). As of 1 January 2020, there were 1,312,512 second-generation minors, 76.6% of whom were born in Italy (ISTAT 2022). Approximately 870,000 of them were enrolled at various levels of the Italian school system in the 2021/2022 school year, making up 10.6% of the total student population, with about two-thirds born in Italy. National statistics indicate a significant growth in secondary school enrolment among migrant students, with an increase of over 30% over the past decade (MIM 2023).

2.2 Children of immigrants in the Italian education system

The Italian education system is comprehensive up to age 14 and compulsory from ages 6 to 16. The first cycle comprises primary education (ages 6–11, 5 years) and lower secondary education (ages 11–14, 3 years). After completing lower secondary school, students move to the second cycle, choosing between upper secondary education programmes (starting at age 14 and lasting 5 years) or training programmes (starting at age 14 and lasting 3 or 4 years). The latter, chosen by around 8% of lower secondary graduates, are designed to align with labour market needs and do not lead to university access. Upper secondary education – attended by over 80% of students – is divided into general (lyceum), technical, and vocational tracks. In the 2021/2022 school year, general tracks accounted for 51% of enrolments, technical for 31.7%, and vocational for 17.1% (MI 2021). All three tracks last for 5 years and grant university access, but enrolment is lower among graduates from technical and vocational institutes than graduates from the general track. A report by the Italian Ministry of Education (MIUR 2016) showed that in 2015/2016, 74% of general track graduates enrolled in university, compared to 32% from technical and 11.7% from vocational tracks.

For migrant students a different pattern emerges: unlike their Italian counterparts, and in contrast to other European countries, they are more likely to choose technical and vocational tracks (Barban and White 2011; Ferrara and Brunori 2024). Indeed, in the 2020/2021 school year, only 27.3% of non-Italian students chose general education (lyceum), while 37.8% and 34.9% chose technical and vocational education, respectively. This trend is less marked among children of immigrants born in Italy, whose choices increasingly resemble those of their native peers (MIM 2023). In addition to concentration in non-academic tracks, children of immigrants in Italy face higher dropout rates and lower academic performance than their Italian counterparts (Mussino and Strozza 2011; Azzolini and Barone 2011; Giudici, Trappolini and Vicari 2021).

Regarding university enrolment, among 2016 graduates, 51.1% of Italians and 33.9% of migrants enrolled immediately in university after high school (MIUR 2018). Recent research confirms lower university transition rates among students with migrant backgrounds compared to Italian students, with differences by country of origin (Giudici, Trappolini, and Priulla 2024).

Taken together, these features of the Italian education system are particularly relevant for understanding potential mismatches between academic expectations and subsequent university enrolment, as formal access to higher education does not necessarily translate into equal transition probabilities across educational tracks and student groups.

3. Literature background and research hypotheses

Educational inequalities in school performance and attainment levels between children of immigrants and their native peers are well documented in international literature (Azzolini 2011; Beauchemin, Hamel, and Simon 2016; Crul, Schneider, and Lelie 2012; Fangen, Johansson, and Hammarén 2011; Picot and Hou 2013; Ricucci 2010; Santagati and Colussi 2020). Comparative European studies reveal significant variation in the educational trajectories and school outcomes of second-generation students from similar origin groups across different countries (Crul, Schneider, and Lelie 2012; Griga and Hadjar 2014; Jackson, Jonsson, and Rudolphi 2012; Murdoch et al. 2016; Giudici, Trappolini, and Vicari 2021). These differences stem from a combination of factors, including migrant origin, socioeconomic status, parental education, financial resources, school system structure, and expectations.

The literature also highlights the important role of secondary school system stratification in shaping migrant students' transitions to higher education. Griga and Hadjar (2014) find that less stratified secondary systems – those offering alternative pathways – improve outcomes for migrant students. Similarly, Heath and Brinbaum (2014) show that migrants in countries like Belgium, Germany, and the Netherlands are often channelled into lower-status vocational tracks. By contrast, more comprehensive systems such as those in England, Finland, France, and Sweden tend to support greater academic progression among migrant students with comparable socioeconomic backgrounds.

Several studies from Europe and the United States indicate that children of immigrants have higher educational aspirations than their native peers, even after controlling for school performance and socioeconomic status (Bates and Anderson 2014; Brinbaum and Cebolla-Boado 2007; Kao and Tienda 1998; Goyette and Xie 1999; Cheng and Starks 2002; Penn and Scattergood 1992; Strand and Winston 2008; Salikutluk 2016)[4].

[4] Various mechanisms have been proposed to explain this so-called 'aspiration–achievement paradox', which are not necessarily mutually exclusive: immigrant optimism (Kao and Tienda 1995; Salikutluk 2016), information bias (Kao and Tienda 1998), significant others (Phalet and Schönpflug 2001), and blocked opportunities (Sue and Okazaki 1990). The first approach suggests that first-generation immigrants are positively selected, optimistic, and confident about the possibility of improving their social status, and transfer their aspirations to their offspring (Kao and Tienda 1995; Salikutluk 2016). The information bias approach posits that the children of immigrants may hold more unrealistic aspirations than natives due to limited knowledge about the education system (Kao and Tienda 1998). The significant others approach focuses on the role of family and peers in influencing educational aspirations (Phalet and Schönpflug 2001). Finally, the blocked opportunities approach states that students with a migrant background, anticipating labour market discrimination, tend to place greater value on education than non-migrant students as a defensive strategy (Sue and Okazaki 1990).

Nevertheless, regarding university enrolment, some studies have documented disadvantages for migrant students compared to natives in several countries (e.g., Brinbaum and Guégnard 2013; Buonomo et al. 2023). In Italy, recent research shows that children of immigrants continue to have lower access to tertiary education than their Italian peers (Buonomo et al. 2024; Di Patrizio and Giudici 2022). Consistent with this evidence, *we expect that among students with comparable positive academic expectations, migrant-origin students are less likely to enrol in university, indicating a potential misalignment between expectations and realised educational outcomes* (Hypothesis 1).

Another key area of research focuses on whether there is a critical age at arrival (or migrant generation) beyond which academic performance significantly declines. Migrant generation serves as a proxy for both intercultural interactions and access to host culture information (Buonomo et al. 2024). Late arrival, primarily linked to challenges in language acquisition and mastering other subjects, has a negative impact on educational outcomes, consistent across genders and family backgrounds but varying by region of origin (Böhlmark 2008; Myers, Gao, and Emeka 2009; van Ours and Veenman 2006) and country of destination (OECD 2010). Because migrant generation (or age at arrival) reflects students' level of inclusion in the educational system, it may influence both academic expectations and university enrolment. Accordingly, *we expect 1.25 generation migrants – students who enter the Italian school system after age 10 – to have lower academic expectations and a lower likelihood of enrolling in university than their Italian peers. Conversely, we expect that the academic expectations and university enrolment of second-generation students (2G) or 1.75 generation – born in Italy or entering the school system before age 6 – will be similar to those of their Italian classmates* (Hypothesis 2).

The literature further documents disparities in both academic expectations and achievement by country of origin (Penn and Scattergood 1992; Feliciano 2005; Brinbaum and Cebolla-Boado 2007; Strand and Winston 2008; Salikutluk 2016; Hadjar and Scharf 2019; Ichou and Van Zanten 2019; Parasnis and Swan 2020; Ferrara and Salikutluk 2025), emphasising the complex interplay of linguistic, institutional, economic, and cultural factors. For example, Feliciano (2005) shows that in the United States, pre-migration educational inequalities are often reproduced among the next generation. In Europe, a systematic review of sociological research in France finds ethnic educational inequalities, particularly among post-colonial North and sub-Saharan African minority students (Ichou and Van Zanten 2019). In Germany, Ferrara and Salikutluk (2025) investigate immigrant–native gaps in the level, (mis)alignment, and (un)certainty of teenage occupational and educational aspirations and their consequences for educational attainment, highlighting differences among migrant groups.

Regarding the link between academic aspirations and university enrolment, scholars agree that high aspirations among immigrant children can mitigate initial disadvantages

and help bridge gaps in upper secondary education. However, some studies caution that this pattern may have unintended consequences for later outcomes. In Germany, Dollman and Weißmann (2018) find that while optimistic choices reduce ethnic differences in educational participation, higher dropout rates among immigrants may offset these gains. Similarly, Birkelund (2020) shows that high expectations among ethnic minorities in Denmark help close educational gaps with native peers, but may push academically weaker students into less feasible educational trajectories.

Despite a large body of research highlighting educational expectations as a key determinant of subsequent attainment (Feliciano and Lanuza 2016; Ferrara and Salikutluk 2025), some studies suggest that this relationship may be confounded by the limited consideration given to family-level resources (Fishman 2019). Family social capital – including parental involvement and support, family size, and living in a single-parent family – has been shown to significantly influence college enrolment and completion (Dufur et al. 2024). These dimensions are particularly relevant for migrant populations, as they reflect differences across origin groups in socioeconomic background, migration-related selectivity, and educational aspirations (Feliciano 2005; Salikutluk 2016).

Other factors also play a role in shaping the relationship between educational expectations and attainment. Gender, socioeconomic status, students' attitudes and self-perception, school grades, parents' level of education, students' interactions with members of their personal networks, school location (urban or rural), and school track are among the most frequently cited determinants (Azzolini and Barone 2012; Brinbaum and Cebolla-Boado 2007; Marbach and Van Zanten 2024; Koricich, Chen, and Hughes 2018).

Building on this literature, we consider that differences in individual and family characteristics and attitudes toward education among migrant groups are major determinants of both academic expectations and university enrolment. Consequently, *we expect that, once these factors are accounted for, differences in academic expectations and university enrolment across migrant groups will be minimal to small* (Hypothesis 3).

4. Data and methods

Our study combines two datasets: the 2015 Integration of the Second-Generation survey (hereafter 2015 ISG), conducted by the Italian National Institute of Statistics (ISTAT) in 2015, and administrative data on university enrolment from the Italian Ministry of University and Research (*Anagrafe dello studente,* hereafter ANS-MUR). This linkage enables us to track students' enrolment outcomes over three academic years. The 2015 ISG survey collected information from a sample of 1,400 lower and upper secondary

schools, each with at least 5 students with foreign citizenship[5] (hereafter migrants), making a total of 68,127 students. The data are nationally representative of migrant-origin students, who constitute 46.5% of the sample, allowing comparative analyses between migrants and their Italian classmates (Conti and Prati 2020). The survey sample was designed to distinguish between different integration models among the 10 most represented nationalities in Italian secondary schools (Romanian, Albanian, Moroccan, Chinese, Filipino, Moldovan, Peruvian, Ukrainian, Ecuadoran, and Indian) and also considers migrant generation, classifying students according to the Italian school system (born in Italy, arrived before age 6, between 6 and 10, and 11+).[6]

The survey gathers extensive data on students' sociodemographic characteristics, educational paths, interactions within the school environment (including with teachers and peers), Italian language proficiency and usage, participation in extracurricular activities, family and household characteristics, personal educational and career intentions, highest parental educational attainment, and family interest in education.

The ANS-MUR register collects information on students enrolled in, or graduated from, Italian universities. Using a longitudinal approach, we track students who were enrolled in the final year of Italian high school in 2014/2015 (as identified in the 2015 ISG survey) and follow their subsequent university enrolment over the next three years (academic years 2015/2016, 2016/2017, and 2017/2018) or their decision not to enrol. This was achieved through deterministic record linkage between the 2015 ISG data and ANS-MUR datasets using a unique anonymised individual code, which was subsequently removed for privacy.

The 2015 ISG survey captured 16,636 migrant-origin students and 18,791 Italian students enrolled in upper secondary schools. Our study focuses on differences in academic expectations and university enrolment between Italian and migrant-origin students. We therefore selected students from the ISG survey whose last year of Italian high school was 2015, resulting in 2,003 migrant and 2,296 Italian students. We further excluded individuals with missing mathematics and Italian grades (n = 39) and those who responded 'I do not know' regarding their personal study and work intentions (n = 320). Hence, our final sample consists of 3,940 students, 46.6% of whom are migrant-origin students.

[5] The sampling followed a stratified approach, considering the geographical distribution of the migrant student population across Italy. Given the significantly different distribution of migrant students in Italian secondary schools – some schools having none, especially in the Southern regions – the sampling of schools involved in the survey required setting a limit of at least 5 migrant students in the sample school. A description of the details regarding the sampling procedure is provided in the Appendix.

[6] These are the categories used at the national level because they correspond to different levels of study: nursery and kindergarten (up to 6 years old), primary school (between 6 and 10 years old), and secondary school (11 and above). For further details see Conti and Quattrociocchi (2017), *L'indagine sull'integrazione delle seconde generazioni: obiettivi, metodologia e organizzazione*, ISTAT.

Before proceeding, a few limitations should be noted. First, our study focuses on students who reach the final year of Italian high school, which particularly selects top-performing migrant-origin students, given the higher dropout rates and lower performance observed in this population. Second, we analyse students enrolled in the last high school year without distinguishing actual graduates. Finally, we classify students as Italian or migrant based on citizenship, which is the only verified information available in the 2015 ISG survey. Consequently, we cannot account for students who acquired Italian citizenship through naturalisation, children of mixed couples, or those adopted abroad (who automatically acquire Italian citizenship); these individuals are categorised as Italian students.

4.1 Dependent variable

The dependent variable combines two aspects: students' academic expectations and their university enrolment. Academic expectations are derived from the 2015 ISG survey using the question: *What do you intend to do after finishing high school?* Possible responses are 'go to University,' 'go to work', 'pursue a vocationally oriented course', 'stay at home', 'other', and 'I do not know'.[7] For analysis purposes, the variable *students' academic expectations* is coded 1 if the response is 'go to University', and 0 otherwise. The variable *student's university enrolment* is obtained from the ANS-MUR register and is coded 1 if the student enrols in the 3 years after 2014/2015 (i.e., during 2015/2016, 2016/2017, or 2017/2018) and 0 otherwise.

Combining these two dimensions, we define the variable *students' expectations–enrolment* as four categories: (1) academic expectations and university enrolment, academic expectations and no university enrolment, (3) no academic expectations and university enrolment, or (4) no academic expectations and no university enrolment.

4.2 Main explicative variables

We consider three main explicative variables:

1. *Migrant status*: Distinguishes between Italian and migrant-origin students.
2. *Migrant generation*: To move beyond the Italian–migrant dichotomy, migrants are classified into four different migrant generations based on age at arrival. In the 2015 ISG survey these migrant generations align with different levels of study, as detailed

[7] As already explained, the cases that answered 'I do not know' were excluded from the sample.

in footnote 3. The identified groups are (1) Second-generation (2G) (born in Italy), (2) 1.75 generation (migrants who arrived before age 6), (3) 1.5 generation (migrants who arrived between ages 6 and 10), and (4) 1.25 generation (migrants who arrived at age 11 or older).

3. *Migrants' country of origin*: To further account for heterogeneity among migrants, students are classified as from (1) Romania, (2) Albania, (3) Morocco, (4) China, (5) Philippines, (6) Moldova, (7) Ukraine, (8) Ecuador, (9) Peru, (10) Other HDC,[8] and (11) Other HMPC.[9]

4.3 Control variables

We include 5 categories of control variables:

1. Demographic characteristics – *Sex*: men (reference), women; *Household composition*: both parents (reference), single-parent family or other.
2. Socioeconomic characteristics – *Parents' highest educational level*: none, primary or lower secondary (reference), upper secondary, tertiary.
3. School characteristics and students' performance – *Type of high school*: general (reference), vocational, or technical; *Degree of urbanisation of the area where the high school is located*: densely populated areas (reference), intermediate density areas, thinly populated areas; *Grade at school*: categorised into quartiles (reference: 1st quartile – lowest grades); *Study path*: repeating student (reference), non-repeating student.
4. Level of social integration at school – *Interaction with classmates during free time*: no (reference), yes.
5. The family and the student's attitude toward education/study – *Family interest in education*; no (reference), yes; *Importance of study to the student*: categorised into quartiles (reference: 1st quartile – lowest importance). [10]

[8] Migrants coming from Highly Developed Countries.
[9] Migrants coming from High Migratory Pressure Countries.
[10] *Grade at school* and *Importance of study to the student* were operationalized in quartiles to allow for flexible, non-linear associations with the outcomes of interest and to preserve a fine-grained variation in the distributions. Alternative specifications using dichotomous measures were tested and yielded substantively similar results.

4.4 Method and analytical strategy

To test our research hypotheses, we estimate multinomial logistic regressions and conduct three separate analyses. In all models, we first estimate relative risk ratios: full model estimates are reported in the Appendix (Tables A-1, A-3, and A-5). To facilitate interpretation, we then compute predicted probabilities with confidence intervals centred on the predictions and with lengths equal to 2 × 1.39 × standard errors. This is necessary to obtain an average level of 5% for Type I errors in pairwise comparisons of a group of means (Goldstein and Healy 1995). Tables reporting predicted probabilities and confidence intervals are provided in the Appendix (Tables A-2, A-4, and A-6).

Model 1 refers to Hypothesis 1 and analyses differences in academic expectations and university enrolment by migrant status. In this context, the main explicative variable is citizenship, distinguishing between Italian and migrant-origin students (Figure 1). Model 2 addresses Hypothesis 2 and analyses differences in academic expectations and university enrolment by migrant generation (the main explicative variable) in the full sample (Figure 2). Finally, model 3 addresses Hypothesis 3 and focuses exclusively on migrant students. It analyses differences in academic expectations and university enrolment by region/country of origin (the main explicative variable), first estimating a null model without individual- and family-level controls and then comparing it with the fully adjusted model (Figure 3).

All models include survey weights and robust standard errors clustered at the school level to account for potential within-school correlation in student outcomes. School fixed effects are not included, as they would absorb most between-school variation and limit our ability to assess how migrant background and family characteristics relate to academic expectations and university enrolment. This choice is acknowledged as a limitation in the Discussion section.

5. Results

5.1 Descriptive results

Table 1 compares migrant-origin students and their Italian classmates across demographic, academic, and socio-cultural characteristics. The descriptive statistics highlight both similarities and systematic differences between the two groups, which are critical for understanding the educational and social integration of migrant-origin students in Italy.

Table 1: Descriptive statistics of the sample and outcomes

	Migrant students	Italian students		Migrant students	Italian students
Sex			**Migrant generations**		
Men	43.8%	50.0%	2nd generation (2G)	9.1%	-
Women	56.2%	50.0%	1.75	20.1%	-
Household composition			1.5	35.2%	-
Both parents	70.4%	81.6%	1.25	35.6%	-
Single-parent family or other	29.6%	18.4%	**Country of citizenship**		
Parents' highest educational level			Italy	-	100.0%
None, primary, or lower secondary	21.8%	26.7%	Romania	23.5%	-
Upper secondary	50.8%	51.2%	Albania	18.0%	-
Tertiary	20.9%	20.1%	Morocco	7.5%	-
I don't know	6.5%	1.9%	Ukraine	5.6%	-
Type of high school			Moldova	5.2%	-
Vocational or Technical	76.8%	64.1%	Philippines	5.1%	-
General	23.2%	35.9%	Peru	4.0%	-
Degree of urbanisation of the area where the high school is located			Ecuador	3.9%	-
Densely populated areas	52.6%	46.8%	China	2.6%	-
Intermediate density areas	43.9%	49.7%	Other HDC (b)	5.0%	-
Thinly populated areas	3.5%	3.5%	Other HMPC (c)	19.7%	-
Grade at high school (a)					
Q1	40.7%	31.7%	**Outcomes**		
Q2	20.7%	22.4%			
Q3	27.8%	30.8%	**Academic expectations**		
Q4	10.7%	15.0%	Yes	52.0%	53.3%
Study path			No	48.0%	46.7%
Repeating student	33.3%	25.1%			
Non-repeating student	66.7%	74.9%	**University enrolment**		
Interaction with classmates in free time			Yes	39.8%	50.0%
Yes	75.6%	80.7%	*o/w In the same year of graduation*	*82.2%*	*88.5%*
No	24.4%	19.3%	*o/w In the following two years*	*17.8%*	*11.5%*
Family's interest on education			No	60.2%	50.0%
Yes	42.6%	49.1%			
No	57.4%	50.9%	**Academic intentions and university enrolment**		
Importance of study for the student (a)			Yes and Yes	34.3%	43.0%
Q1	23.2%	27.3%	Yes and No	17.7%	10.3%
Q2	22.1%	22.4%	No and Yes	5.5%	7.0%
Q3	28.2%	25.4%	No and No	42.5%	39.7%
Q4	26.5%	24.9%			
Total %	**100.0%**	**100.0%**	**Total %**	**100.0%**	**100.0%**
Total a.v. (weighted)	**16,504**	**142,293**	**Total a.v. (weighted)**	**16,504**	**142,293**
Total a.v. (non-weighted)	**1,837**	**2,103**	**Total a.v. (non-weighted)**	**1,837**	**2,103**

Note: Percentages are weighted and should be read in columns. [(a)] The variable is classified according to the quartiles of the distribution. Q1 refers to the lowest grades or lowest importance. [(b)] Migrants from Highly Developed Countries. [(c)] Migrants from High Migratory Pressure Countries.
Source: Authors' elaboration of 2015 ISG and ANS-MUR data.

Migrant-origin students include a slightly higher proportion of women than Italian students. A larger share of Italian students (81.6%) than migrant-origin students (70.4%) live with both parents. Parents' educational levels are broadly similar across groups, with

upper secondary education being the most common level. More pronounced differences emerge in school-related characteristics. Migrant-origin students are substantially more likely to attend vocational or technical high schools (76.8%) than Italian students (64.1%), and correspondingly less likely to be enrolled in general high schools (23.2% versus 35.9%). They are also more concentrated in schools located in densely populated areas. In terms of high school grade, migrant-origin students are overrepresented in the lowest grade quartile and are more likely to have experienced grade retention than their Italian peers.

Regarding socio-cultural characteristics, Italian students report slightly higher levels of interaction with classmates during free time. Family interest in education is also more frequently reported among Italian students (49.1%) than among migrants (42.6%), while the importance attributed to studying is broadly similar across groups, and slightly higher among migrant-origin students. Most migrant-origin students belong to the 1.25 and 1.5 generations, indicating arrival after age 6, and the largest origin groups are Romanian (23.5%), Albanian (18.0%), and Moroccan (7.5%).

Turning to outcomes, the academic expectations of Italian and migrant-origin students are similar. However, differences emerge in actual university enrolment: 50% of Italian students enrol in university, compared with 39.8% of migrant-origin students. Among those who enrol, the majority do so in the same year as high school completion, regardless of migration background (88.5% among Italians and 82.2% among migrants), with the remainder enrolling in the following two years.

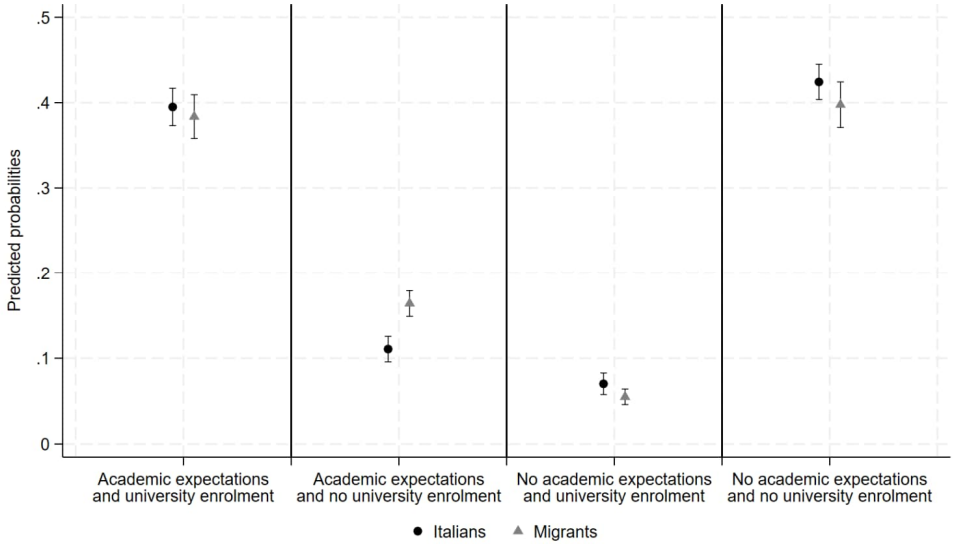
5.2 Differences in students' academic expectations and university enrolment

Figure 1 displays adjusted predicted probabilities with confidence intervals for the 'student's expectations–enrolment' outcome by migrant status. Net of all controls, Italian and migrant-origin students do not differ in the probability of reporting positive academic expectations and subsequently enrolling in university (39.5%, 83.5%CI: 0.373–0.417 for Italians; and 38.4%, 83.5%CI: 0.358–0.409 for migrants). Likewise, no differences emerge in the likelihood of enrolling in university despite reporting negative academic expectations (7.0%, 83.5%CI: 0.058–0.083 for Italian students and 5.5%, 83.5%CI: 0.046–0.064 for migrant students), nor in the likelihood of reporting negative expectations and not enrolling (42.4%, 83.5%CI: 0.403–0.444 and 39.8%, 83.5%CI: 0.370–0.424, respectively).

By contrast, differences are observed in the likelihood of reporting positive academic expectations without subsequently enrolling in university. Specifically, during their final high school year, migrant-origin students have a higher probability of intending to pursue university education but not enrolling compared to their Italian peers (16.4%

versus 11.1%). Additional analyses indicate that students in this group are more likely to be women, to have parents with lower educational attainment, to be in vocational or technical education, to live in single-parent or more complex family structures, to have lower grades and a history of grade retention, to report limited interaction with classmates during free time, and to come from families showing low interest in education (see the full model in the Appendix, Table A-1).

Figure 1: Adjusted predicted probabilities of student's expectations–enrolment by migrant background



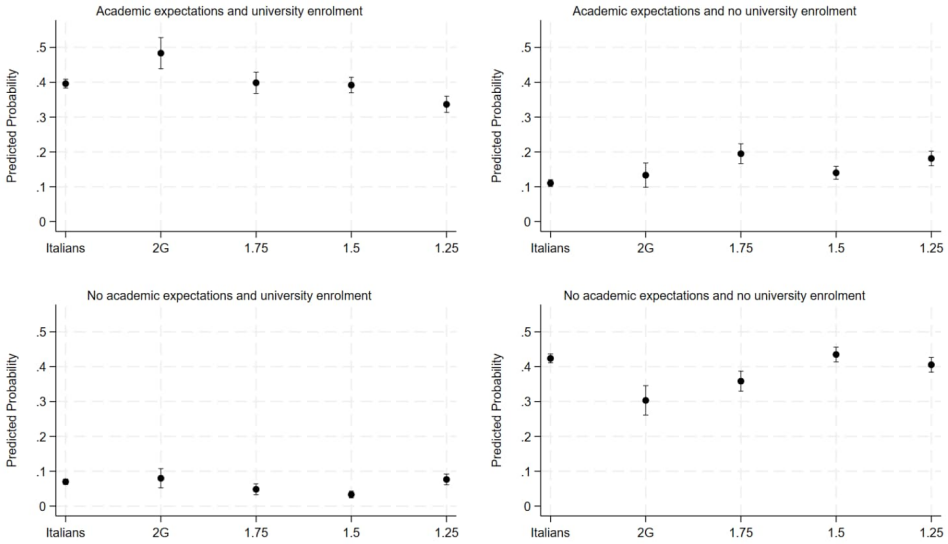
Note: Results from the multinomial logistic regression model weighted and adjusted for sex, parents' highest educational level, type of high school, household composition, grade at high school, study path, interaction with classmates during free time, family's interest in education, importance of study for the student, degree of urbanisation of the area where the high school is located. Predicted probabilities refer to the population average. 83.5% CI. Full model is provided in the Appendix, Table A-1. A table with the values and CIs displayed in this figure is provided in the Appendix,Table A-2.
Source: Authors' elaboration of 2015 ISG and ANS-MUR data.

Figure 2 presents adjusted predicted probabilities of the 'student's expectations–enrolment' outcome for Italian and migrant-origin students, distinguished by migrant generation. Net of all controls, second-generation students (2G) display the highest probability of reporting positive academic expectations and subsequently enrolling in university (48.3%, 83.5%CI: 0.438–0.528). Italian students (39.6%, 83.5%CI: 0.383–0.408), 1.75-generation migrants who arrived before age 6 (39.8%, 83.5%CI: 0.368–0.428), and 1.5-generation migrants who arrived between ages 6 and 10 (39.2%, 83.5%CI: 0.369–0.413) show a very similar pattern. Conversely, 1.25-generation

migrants – those who arrived at age 11 or older – are less likely to report positive academic expectations and to enrol in university than the other groups (33.7%, 83.5%CI: 0.313–0.359).

With respect to reporting positive academic expectations without subsequent university enrolment, all migrant-origin groups exhibit higher probabilities than their Italian classmates, with the exception of 2G students, whose estimates do not differ from those of Italians. Finally, 2G and 1.75-generation students are less likely to report negative academic expectations and not enrol in university than students in the remaining groups.

Figure 2: Adjusted predicted probabilities of student's expectations–enrolment by migrant generation

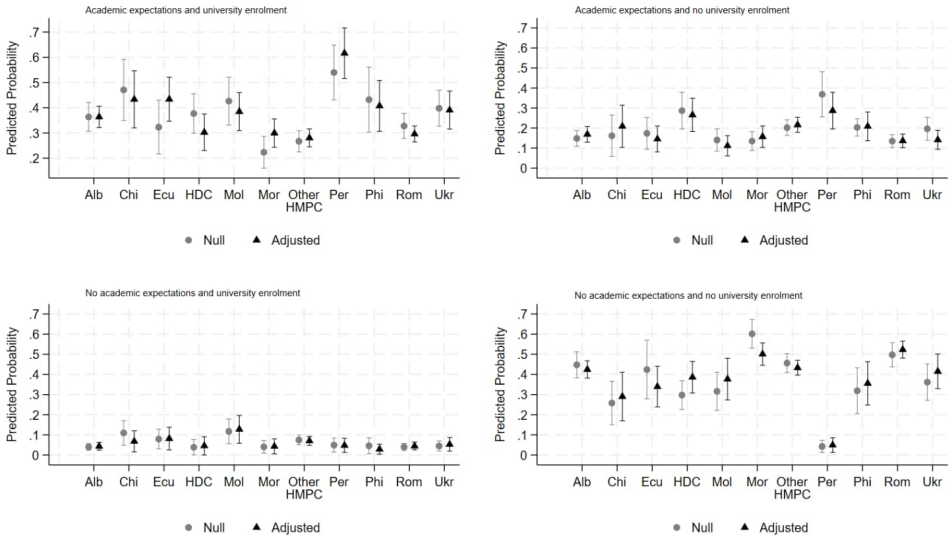


Note: Results from the multinomial logistic regression model weighted and adjusted for sex, parents' highest educational level, type of high school, household composition, grade at school, study path, interaction with classmates during free time, family's interest in education, importance of study for the student, degree of urbanisation of the area where the high school is located. Predicted probabilities refer to the population average. 83.5% CI. 2G refers to second generation; 1.75 refers to migrants who arrived before age 6; 1.5 refers to migrants who arrived between ages 6 and 10; 1.25 refers to migrants who arrived at age 11 or older. Full model is provided in the Appendix, Table A-3. A table with the values and CIs displayed in this figure is provided in the Appendix, Table A-4.
Source: Authors' elaboration of 2015 ISG and ANS-MUR data.

To move further beyond the Italian–migrant dichotomy, we analyse differences by migrants' region/country of origin. Figure 3 presents predicted probabilities for the 'student's expectations–enrolment' outcome among migrant students only, comparing a

null (unadjusted) specification without individual- and family-level controls with the fully adjusted model.

Figure 3: (Un)Adjusted predicted probabilities of student's expectations–enrolment by migrants' region/country of origin



Note: Results from the multinomial logistic regression model weighted unadjusted (null) and adjusted for sex, parents' highest educational level, type of high school, household composition, grade at school, study path, interaction with classmates during free time, family's interest in education, importance of study for the student, degree of urbanisation of the area where the high school is located. Predicted probabilities refer to the population average. 83.5% CI. HDC refers to students coming from Highly Developed Countries; Other HMPC refers to students coming from other High Migratory Pressure Countries. Full model is shown in the Appendix, Table A-5. A table with the values and CIs displayed in this figure is provided in the Appendix, Table A-6.
Source: Authors' elaboration of 2015 ISG and ANS-MUR data.

Overall, both the unadjusted and adjusted models display very similar patterns across migrant groups. Differences by region/country of origin are generally small in the null specification and remain largely unchanged or further attenuate once individual and family characteristics and attitudes are accounted for. Net of all controls, predicted probabilities of reporting positive academic expectations and enrolling in university range between approximately 28% and 43% across most migrant groups. Peruvian students are an exception and stand out from the other groups. They exhibit the highest probability of reporting positive academic expectations and subsequently enrolling in university (61.6%, 83.5%CI: 0.516–0.716), exceeding both other migrant groups and Italian students (see Figure 1). Peruvian students also show the highest probabilities of reporting positive academic expectations without subsequent enrolment (28.7%,

83.5%CI: 0.195–0.378), as well as the lowest probability of reporting negative academic expectations and enrolling in university (4.9%, 83.5%CI: 0.013–0.086).

Across all migrant groups, the probability of enrolling in university despite reporting negative academic expectations remains low in both the unadjusted and adjusted models, further underscoring the overall similarity in patterns across origin groups.

6. Discussion and conclusion

This study contributes to the literature by jointly examining academic expectations and subsequent university enrolment among migrant-origin students and their Italian classmates in Italy. By combining these two dimensions we assess the degree of match or mismatch between students' academic expectations and realised university enrolment, shedding light on whether similar expectations translate into comparable transitions to higher education or whether barriers emerge between expectations and behaviour across migrant backgrounds.

Using a unique dataset that links survey data from the 2015 Integration of the Second Generation, conducted by ISTAT, to administrative records on university enrolment from the Italian Ministry of University and Research, we follow a cohort of students enrolled in the final year of high schools in 2015 and observe their university enrolment over the subsequent three academic years (2015/2016, 2016/2017, and 2017/2018). This data structure enables a direct assessment of the expectations–enrolment relationship, and allows us to overcome common limitations in previous research, which often relies on self-reported enrolment intentions or cross-sectional designs.

Our analysis addresses three main dimensions. First, we compare Italian and migrant-origin students, treating the latter as a heterogenous group. Second, we distinguish migrant-origin students by migrant generation to capture different levels of exposure to the Italian educational system. Third, focusing exclusively on migrant students, we explore differences by region or country of origin.

We tested three hypotheses. The first was that among students with similar positive academic expectations, migrant-origin students would be less likely than their Italian peers to enrol in university. Our results support this hypothesis. Net of a wide set of control variables – including socioeconomic and demographic characteristics, student performance, school-related characteristics, indicators of social integration at school, and student and family attitudes toward education – migrant-origin students are more likely than their Italian classmates to report positive academic expectations without subsequently enrolling in university. While 11.1% of Italian students express positive academic expectations but do not enrol, this proportion rises to 16.4% among migrant-origin students, corresponding to a gap of 5.3 percentage points and a relative increase of

almost 48%. No meaningful differences emerge between the two populations in the remaining categories of the expectations–enrolment outcome.

Unlike previous studies that have examined academic aspiration and university enrolment as separate outcomes (e.g., Brinbaum and Cebolla-Boado 2007; Buonomo et al. 2024; Di Patrizio, Trappolini, and Giudici 2023; Kao and Tienda 1998), our joint approach highlights a potential aspiration–achievement gap among migrant-origin students. Despite reporting high or comparable academic expectations relative to their Italian classmates, migrant-origin students appear more likely to face barriers in translating these expectations into actual university enrolment. This gap may be particularly pronounced for migrant-origin students, who often face significant educational disadvantages due to lower socioeconomic status, weaker academic performance, and structural barriers within the school system (Mussino and Strozza 2011). These challenges, often compounded by financial constraints, limited access to resources, language barriers, difficulties in social integration, and insufficient guidance and support in navigating the higher education system, may hinder the realisation of their educational expectations as actual enrolment (Azzolini 2011; Bertozzi 2018; Bozzetti 2018). Consistently, our descriptive analysis shows that students who report positive academic expectations but do not enrol tend to experience a combination of such disadvantages and constraints (see Table A-1 in the Appendix).

Our second hypothesis concerned migrant generation, which we conceptualise as reflecting different levels of inclusion in the Italian educational system. We expected students belonging to the 1.25 generation – those who entered the Italian school system after age 10 – to display lower academic expectations and a lower likelihood of university enrolment than Italian peers and earlier-arriving migrant groups. Conversely, we anticipated that second-generation (2G) and 1.75-generation students – born in Italy or arriving before age 6 – would resemble their Italian classmates. Our findings largely confirm these expectations. Students belonging to the 1.25 generation exhibit the lowest probabilities of declaring positive academic expectations and enrolling in university, while no differences emerge between Italian students and the 1.75 generation. Interestingly, 2G students stand out as the group with the highest likelihood of both positive academic expectations and university enrolment.

These results are consistent with international research showing that children of immigrants born in the destination country tend to be better integrated into the educational system and to achieve higher educational outcomes than later-arriving migrant peers (Heath and Kilpi-Jakonen 2012; Mussino and Strozza 2011; Riccardi, Giannantoni, and Le Rose 2019; van Ours and Veenman 2006). However, it is important to note that our analysis focuses on students enrolled in the final year of upper secondary education, a population that is already positively selected. This selection process may

partly explain why 2G students outperform not only migrant groups but also their Italian peers.

Our third hypothesis posited that differences in individual and family characteristics and attitudes toward education would account for variation in both academic expectations and university enrolment across migrant groups, thereby reducing cross-origin differences. The results provide only partial support for this expectation. Differences by country of origin are already observable in the unadjusted specification and remain largely stable after the inclusion of a wide range of individual- and family-level controls. While some minor variations across groups slightly attenuate in the fully adjusted model, the overall pattern changes little. This suggests that the variables included in our analysis do not operate as major determinants of cross-origin differences in the alignment between academic expectations and university enrolment.

The persistence of small differences across origin groups indicates that mechanisms other than standard compositional characteristics may shape the transition from upper secondary education to university among migrant students. These mechanisms may include migration-specific resources, access to information and guidance during the school-to-university transition, linguistic and institutional familiarity, and group-specific migration histories. At the same time, the magnitude of these differences is limited, and most migrant groups display broadly similar patterns in both the unadjusted and adjusted models. An exception is observed among Peruvian students, who exhibit the highest academic expectations and university enrolment compared to other migrant groups (Romanian, Moroccan, Ukrainian, Moldovan, and Albanian students). One possible explanation for this pattern relates to family-level characteristics that our data cannot fully capture, such as family social class (Fishman 2019). The Peruvian community shows relatively high employment rates among both men and women and a higher concentration in medium-skilled occupations (mainly in the service sector, including the public sector, commerce, education, and healthcare) compared to the average employment profile of non-EU migrants in Italy (MLPS 2015). Linguistic factors (Gil-Hernández and Gracia 2018), which are not observed in our analysis, may also contribute to these differences.

Given these findings, we suggest that further research would benefit from qualitative or mixed-method studies to better understand how migrant-origin students navigate the transition from secondary to tertiary education, and particularly why some students with positive academic expectations do not ultimately enrol in university.

This study makes three important contributions to the literature. First, by linking survey data with administrative records, it provides a more accurate assessment of the relationship between academic expectations and realised university enrolment. Second, it highlights the relevance of analysing the match or mismatch between academic expectations and university enrolment of both migrant-origin students and their Italian

counterparts, offering insights into the factors influencing educational success or divergence while also focusing on the role of the migrant generation and migrants' region/country of origin. Third, it shows that in the Italian context, once individual and family characteristics and attitudes toward education are accounted for, differences across migrant origin groups are limited.

This study is not without limitations. By focusing on students enrolled in the final year of upper secondary education, we analyse a highly selected population. However, this approach allows for a realistic analysis of academic expectations and university enrolment among students who are on the verge of obtaining their high school diploma and can potentially enrol in university. Furthermore, we could not consider only actual graduates, which may affect the realism of the results. Additionally, we rely on citizenship to identify migrant status, as this is the only verified information available in the survey, and therefore cannot account for students who acquired Italian citizenship over time. Therefore, we acknowledge that we were unable to include individuals whose inclusion process has advanced to the point of obtaining citizenship (for further details, see Section 4), as this important piece of information is not available in the survey. Additional limitations include the lack of information on family income, parental occupation, linguistic background, and birth order, as well as the inability to distinguish between vocational and technical school tracks – all of which could further influence the relationship between students' academic expectations and university enrolment. Finally, we do not explicitly model school-level contextual effects. While school environments may shape students' academic expectations and university enrolment (Jargowsky and El Komi 2011; Owens 2010; Parcel, Dufur, and Cornell Zito 2010), our analysis focuses on individual- and family-level mechanisms, and the results should be interpreted accordingly.

Despite these limitations, our results underscore the persistence of inequalities in the transition from upper secondary education to university, particularly for migrant-origin students. By jointly analysing expectations and enrolment, we show that migrant-origin students often maintain high academic expectations despite facing substantial structural barriers in translating these expectations into actual enrolment. These findings highlight the need for targeted policy interventions aimed at supporting migrant-origin students during the school-to-university transition, including improved guidance, financial support, language assistance, and stronger school–family connections.

Finally, our results should be interpreted in the institutional context of the Italian education system. While Italy is characterised by early tracking, it also offers relatively flexible pathways to higher education, allowing students from technical and vocational tracks to enrol in university. This institutional flexibility may help explain why migrant students maintain high academic expectations despite facing disadvantages.

At the same time, our findings have theoretical relevance beyond the Italian context. The mechanisms shaping migrant-origin students' expectations and enrolment – such as aspirations, structural barriers, and access to opportunities – are widely observed across different educational systems. However, institutional frameworks play a crucial role in shaping these processes. Compared to more selective, early-tracking systems, the relatively late-tracking and flexible Italian school system can be more inclusive, offering greater opportunities for social mobility and potentially preventing the crystallization of social inequalities.

By situating Italy within this broader comparative perspective, our study highlights how educational systems mediate migrant-origin students' expectations and outcomes. These institutional differences underscore the importance of targeted support in schools, particularly for students who migrate during their education. Swift integration measures – including language support, psychological assistance, a positive school environment, and engagement from family, peers, and teachers – can help students perceive education as valuable and enhance their academic success.

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Appendix – Sampling procedure

The target population of the survey consists of foreign students attending Italian middle schools, high schools, and technical/professional institutes, where there is a minimum presence of at least 5 foreign students. The introduction of a threshold for the presence of foreign students in schools was determined by the fact that many schools, especially in the South, have a small number of foreign students.

The sampling design was therefore planned with reference to the population of foreign students with these characteristics.

A stratified cluster sampling design was adopted, where the primary units (the clusters) are the schools and the final units are the foreign students. The school universe was stratified based on the following variables:

- Region (21 categories)
- Type of municipality (2 categories: municipalities in Central-Northern Italy with more than 250,000 inhabitants and the municipality of Naples in Southern Italy; other municipalities)
- Type of school (3 categories: middle schools, high schools, technical/professional institutes)
- Incidence of foreign students (3 groups defined based on the terciles of the distribution of foreign students in schools in Central-Northern regions and large Southern regions; 2 groups defined based on the median of the distribution of foreign students in schools in the regions of Molise, Basilicata, and Sardinia).

The number of sample schools to be selected from each stratum was determined based on the average number of foreign students per school. The selection of sample schools was carried out randomly with equal probabilities in each stratum.

The allocation of foreign students into the strata defined in the school universe was achieved using a multivariate, multidomain optimal allocation methodology (Bethel 1989; Falorsi et al. 1998), which ensures the minimum sample size that meets the pre-established sampling error constraints at the estimation domain level. The MAUSS software available at the Institute was used for this purpose.

All foreign students belonging to the sampled schools were interviewed. Furthermore, in each class with foreign students, a random sample of the same number of Italian students was selected.

A total of 1,427 schools participated in the survey, out of an initial theoretical sample of 1,448 secondary schools (both lower and upper secondary), representing 98.5% of the sampled schools. A total of 68,127 students were interviewed, of which 36,440 were

Italian and 31,687 were foreign. The theoretical number of foreign students was 38,054; therefore, the response rate for foreign students exceeded 83%.

Table A-1: Multinomial logistic regression of students' expectations–enrolment by migrant background

Academic expectations and university enrolment	RRR	p-value	95% CI	
		Reference		
Academic expectations and no university enrolment				
Migrant status (ref. Italians)				
Migrants	1.52	0.006	1.13	2.05
Sex (ref. Men)				
Women	1.42	0.021	1.05	1.91
Parents highest educational level (ref. None, Primary, Lower-sec.)				
Upper-secondary	0.56	0.001	0.39	0.79
Tertiary	0.66	0.064	0.42	1.02
Do not know	1.36	0.461	0.60	3.05
Type of high school (ref. General)				
Technical or Vocational	2.67	0.000	1.94	3.67
Household composition (ref. Both parents)				
Single-parent family or other	1.56	0.006	1.14	2.14
Grade at school (ref. 1) [(a)]				
2	0.77	0.169	0.53	1.12
3	0.54	0.001	0.38	0.78
4	0.43	0.001	0.26	0.70
Study path (ref. Repeating student)				
Non-repeating student	0.74	0.141	0.50	1.10
Interaction with classmates during free time (ref. Yes)				
No	1.41	0.072	0.97	2.05
Family interest in education (ref. No)				
Yes	0.90	0.458	0.68	1.19
Importance of study for the student (ref. 1) [(a)]				
2	1.06	0.815	0.65	1.72
3	1.15	0.546	0.73	1.82
4	1.29	0.301	0.80	2.09
Degree of urbanisation of the area where the high school is located (ref. Densely populated areas)				
Intermediate density areas	1.14	0.444	0.81	1.59
Thinly populated areas	1.02	0.963	0.45	2.33
_cons	0.27	0.000	0.14	0.53
No academic expectations and university enrolment				
Migrant status (ref. Italians)				
Migrants	0.79	0.284	0.51	1.22
Sex (ref. Men)				
Women	0.73	0.166	0.47	1.14
Parents highest educational level (ref. None, Primary, Lower-sec.)				
Upper-secondary	0.55	0.031	0.32	0.95
Tertiary	0.53	0.085	0.26	1.09
Do not know	0.59	0.332	0.20	1.72
Type of high school (ref. General)				
Technical or Vocational	2.72	0.000	1.75	4.23
Household composition (ref. Both parents)				
Single-parent family or other	1.03	0.914	0.65	1.63

Table A-1: (Continued)

Academic expectations and university enrolment	RRR	p-value	95% CI	
No academic expectations and university enrolment		Reference		
Grade at school (ref. 1) [(a)]				
2	0.70	0.287	0.37	1.34
3	0.61	0.033	0.38	0.96
4	0.70	0.198	0.41	1.20
Study path (ref. Repeating student)				
Non-repeating student	0.78	0.396	0.43	1.39
Interaction with classmates during free time (ref. Yes)				
No	1.55	0.084	0.94	2.55
Family interest on education (ref. No)				
Yes	0.65	0.053	0.42	1.00
Importance of study for the student (ref. 1) [(a)]				
2	0.72	0.288	0.40	1.31
3	0.58	0.049	0.33	1.00
4	0.38	0.000	0.22	0.65
Degree of urbanisation of the area where the high school is located (ref. Densely populated areas)				
Intermediate density areas	0.95	0.803	0.63	1.43
Thinly populated areas	0.74	0.484	0.32	1.72
_cons	0.58	0.190	0.26	1.31
No academic expectations and no university enrolment				
Migrant status (ref. Italians)				
Migrants	0.92	0.592	0.69	1.23
Sex (ref. Men)				
Women	0.90	0.433	0.69	1.17
Parents highest educational level (ref. None, Primary, Lower-sec.)				
Upper-secondary	0.50	0.000	0.36	0.70
Tertiary	0.21	0.000	0.14	0.32
Do not know	1.19	0.691	0.51	2.73
Type of high school (ref. General)				
Technical or Vocational	17.73	0.000	11.37	27.65
Household composition (ref. Both parents)				
Single-parent family or other	1.07	0.657	0.79	1.45
Grade at school (ref. 1) [(a)]				
2	0.55	0.001	0.38	0.79
3	0.33	0.000	0.24	0.46
4	0.13	0.000	0.08	0.21
Study path (ref. Repeating student)				
Non-repeating student	0.46	0.000	0.36	0.60
interaction with classmates during free time (ref. Yes)				
No	1.81	0.001	1.27	2.58
Family interest in education (ref. No)				
Yes	0.80	0.076	0.62	1.02
Importance of study for the student (ref. 1) [(a)]				
2	0.68	0.054	0.46	1.01
3	0.58	0.018	0.37	0.91
4	0.42	0.000	0.29	0.60

Table A-1: (Continued)

Academic expectations and university enrolment	RRR	p-value	95% CI	
	Reference			
No academic expectations and no university enrolment				
Degree of urbanisation of the area where the high school is located (ref. Densely populated areas)				
Intermediate density areas	1.83	0.005	1.20	2.77
Thinly populated areas	2.32	0.074	0.92	5.82
_cons	0.96	0.893	0.51	1.80

Note: [(a)]The variable is classified according to the quartiles of the distribution. Q1 refers to the lowest grades or lowest importance.
Source: Authors' elaboration of 2015 ISG and ANS-MUR data.

Table A-2: Adjusted predicted probabilities of students' expectations–enrolment by migrant background

		PPs	83.5% CI	
Academic expectations and university enrolment	Italians	0.39	0.373	0.417
	Migrants	0.38	0.358	0.409
Academic expectations and no university enrolment	Italians	0.11	0.096	0.125
	Migrants	0.16	0.149	0.179
No academic expectations and university enrolment	Italians	0.07	0.058	0.083
	Migrants	0.05	0.046	0.064
No academic expectations and no university enrolment	Italians	0.42	0.404	0.445
	Migrants	0.40	0.371	0.424

Note: Results from the multinomial logistic regression model weighted and adjusted for sex, parents' highest educational level, type of high school, household composition, grade at high school, study path, interaction with classmates during free time, family's interest in education, importance of study for the student, degree of urbanisation of the area where the high school is located. Predicted probabilities refer to the population average. 83.5% CI.
Source: Authors' elaboration of 2015 ISG and ANS-MUR data.

Table A-3: Multinomial logistic regression of students' expectations–enrolment by migrant generation

Academic expectations and university enrolment	RRR	p-value	95% CI	
	Reference			
Academic expectations and no university enrolment				
Migrant generation (ref. Italians)				
2G	0.88	0.619	0.54	1.45
1.75	1.70	0.002	1.22	2.39
1.5	1.30	0.088	0.96	1.75
1.25	2.00	0.000	1.49	2.68
Sex (ref. Men)				
Women	1.42	0.002	1.13	1.77
Parents highest educational level (ref. None, Primary, Lower-sec.)				
Upper-secondary	0.54	0.000	0.41	0.71
Tertiary	0.64	0.005	0.47	0.87
Do not know	1.29	0.411	0.70	2.37
Type of high school (ref. General)				
Technical or Vocational	2.58	0.000	2.05	3.25

Table A-3: (Continued)

	RRR	p-value	95% CI	
Academic expectations and university enrolment		Reference		
Academic expectations and no university enrolment				
Household composition (ref. Both parents)				
Single-parent family or other	1.50	0.001	1.19	1.90
Grade at school (ref. 1) [(a)]				
2	0.77	0.069	0.57	1.02
3	0.53	0.000	0.40	0.69
4	0.43	0.000	0.31	0.60
Study path (ref. Repeating student)				
Non-repeating student	0.74	0.020	0.57	0.95
Interaction with classmates during free time (ref. Yes)				
No	1.40	0.013	1.07	1.82
Family interest in education (ref. No)				
Yes	0.89	0.287	0.72	1.10
Importance of study for the student (ref. 1) [(a)]				
2	1.05	0.790	0.75	1.47
3	1.13	0.463	0.82	1.56
4	1.24	0.185	0.90	1.71
Degree of urbanisation of the area where the high school is located (ref. Densely populated areas)				
Intermediate density areas	1.11	0.324	0.90	1.38
Thinly populated areas	1.00	0.990	0.53	1.87
_cons	0.30	0.000	0.18	0.49
No academic expectations and university enrolment				
Migrant generation (ref. Italians)				
2G	0.80	0.474	0.44	1.46
1.75	0.64	0.106	0.37	1.10
1.5	0.48	0.003	0.29	0.78
1.25	1.32	0.169	0.89	1.97
Sex (ref. Men)				
Women	0.72	0.029	0.54	0.97
Parents highest educational level (ref. None, Primary, Lower-sec.)				
Upper-secondary	0.54	0.000	0.38	0.76
Tertiary	0.50	0.001	0.33	0.76
Do not know	0.56	0.257	0.20	1.53
Type of high school (ref. General)				
Technical or Vocational	2.59	0.000	1.88	3.58
Household composition (ref. Both parents)				
Single-parent family or other	0.97	0.865	0.69	1.37
Grade at school (ref. 1) [(a)]				
2	0.70	0.077	0.47	1.04
3	0.60	0.006	0.41	0.86
4	0.72	0.133	0.47	1.11
Study path (ref. Repeating student)				
Non-repeating student	0.77	0.137	0.55	1.09
Interaction with classmates during free time (ref. Yes)				
No	1.51	0.017	1.08	2.12
Family interest in education (ref. No)				
Yes	0.65	0.004	0.48	0.87

Table A-3: (Continued)

	RRR	p-value	95% CI	
Academic expectations and university enrolment		Reference		
No academic expectations and university enrolment				
Importance of study for the student (ref. 1) [(a)]				
2	0.70	0.073	0.48	1.03
3	0.56	0.003	0.38	0.82
4	0.37	0.000	0.24	0.56
Degree of urbanisation of the area where the high school is located (ref. Densely populated areas)				
Intermediate density areas	0.95	0.708	0.71	1.27
Thinly populated areas	0.76	0.568	0.30	1.95
_cons	0.65	0.161	0.36	1.19
No academic expectations and no university enrolment				
Migrant generation (ref. Italians)				
2G	0.43	0.000	0.27	0.67
1.75	0.73	0.061	0.53	1.01
1.5	1.05	0.697	0.82	1.36
1.25	1.17	0.242	0.90	1.53
Sex (ref. Men)				
Women	0.91	0.309	0.75	1.10
Parents highest educational level (ref. None, Primary, Lower-sec.)				
Upper-secondary	0.48	0.000	0.38	0.60
Tertiary	0.20	0.000	0.15	0.27
Do not know	1.09	0.762	0.63	1.86
Type of high school (ref. General)				
Technical or Vocational	17.37	0.000	13.25	22.77
Household composition (ref. Both parents)				
Single-parent family or other	1.03	0.824	0.82	1.28
Grade at school (ref. 1) [(a)]				
2	0.55	0.000	0.43	0.70
3	0.33	0.000	0.26	0.41
4	0.13	0.000	0.09	0.18
Study path (ref. Repeating student)				
Non-repeating student	0.46	0.000	0.37	0.57
Interaction with classmates during free time (ref. Yes)				
No	1.79	0.000	1.43	2.25
Family interest in education (ref. No)				
Yes	0.80	0.021	0.66	0.97
Importance of study for the student (ref. 1) [(a)]				
2	0.67	0.003	0.51	0.87
3	0.57	0.000	0.44	0.73
4	0.40	0.000	0.30	0.52
Degree of urbanisation of the area where the high school is located (ref. Densely populated areas)				
Intermediate density areas	1.78	0.000	1.47	2.15
Thinly populated areas	2.30	0.001	1.38	3.83
_cons	1.04	0.855	0.68	1.60

Note: [(a)]The variable is classified according to the quartiles of the distribution. Q1 refers to the lowest grades or lowest importance. 2G refers to second generation; 1.75 refers to migrants who arrived before age 6; 1.5 refers to migrants who arrived between ages 6 and 10; 1.25 refers to migrants who arrived at age 11 or older.
Source: Authors' elaboration of 2015 ISG and ANS-MUR data.

Table A-4: Adjusted predicted probabilities of students' expectations–enrolment by migrant generation

Academic expectations and university enrolment				
	PPs	p-value	83.5% CI	
Migrant generation				
Italians	0.396	0.000	0.383	0.408
2G	0.483	0.000	0.439	0.528
1.75	0.398	0.000	0.368	0.429
1.5	0.392	0.000	0.370	0.414
1.25	0.337	0.000	0.314	0.360

Academic expectations and no university enrolment				
	PPs	p-value	83.5% CI	
Migrant generation				
Italians	0.111	0.000	0.101	0.120
2G	0.133	0.000	0.099	0.168
1.75	0.195	0.000	0.166	0.223
1.5	0.140	0.000	0.122	0.159
1.25	0.181	0.000	0.161	0.202

No academic expectations and university enrolment				
	PPs	p-value	83.5% CI	
Migrant generation				
Italians	0.070	0.000	0.062	0.078
2G	0.080	0.000	0.052	0.107
1.75	0.048	0.000	0.033	0.064
1.5	0.033	0.000	0.023	0.043
1.25	0.077	0.000	0.061	0.092

No academic expectations and no university enrolment				
	PPs	p-value	83.5% CI	
Migrant generation				
Italians	0.424	0.000	0.411	0.437
2G	0.303	0.000	0.261	0.345
1.75	0.358	0.000	0.330	0.387
1.5	0.435	0.000	0.414	0.456
1.25	0.406	0.000	0.384	0.427

Note: Results from the multinomial logistic regression model weighted and adjusted for sex, parents' highest educational level, type of high school, household composition, grade at school, study path, interaction with classmates during free time, family's interest in education, importance of study for the student, degree of urbanisation of the area where the high school is located. Predicted probabilities refer to the population average. 83.5% CI. 2G refers to second generation; 1.75 refers to migrants who arrived before age 6; 1.5 refers to migrants who arrived between ages 6 and 10; 1.25 refers to migrants who arrived at age 11 or older.
Source: Authors' elaboration of 2015 ISG and ANS-MUR data.

Table A-5: Multinomial logistic regression of students' expectations–enrolment by migrants' region/country of origin

	RRR	p-value	95% CI	
Academic expectations and university enrolment		Reference		
Academic expectations and no university enrolment				
Migrants' country of origin (ref. Romania)				
HDC	1.85	0.150	0.80	4.28
Other HMPC	1.66	0.071	0.96	2.89
Albania	0.93	0.836	0.49	1.79
Ukraine	0.71	0.363	0.34	1.49
Moldova	0.56	0.177	0.24	1.30
China	0.90	0.831	0.34	2.36
Philippines	0.99	0.975	0.41	2.39
Morocco	1.13	0.769	0.50	2.53
Ecuador	0.63	0.296	0.26	1.51
Peru	0.76	0.536	0.33	1.79
Migrant generation (ref. Born in Italy)				
1.75	2.06	0.213	0.66	6.44
1.5	1.63	0.354	0.58	4.60
1.25	2.50	0.075	0.91	6.82
Sex (ref. Men)				
Women	1.43	0.066	0.98	2.10
Parents highest educational level (ref. None, Primary, Lower-sec.)				

Table A-5: (Continued)

	RRR	p-value	95% CI	
Academic expectations and university enrolment		Reference		
Academic expectations and no university enrolment				
Upper-secondary	0.53	0.016	0.31	0.89
Tertiary	0.67	0.220	0.36	1.26
Do not know	1.74	0.180	0.77	3.92
Type of high school (ref. General)				
Technical or Vocational	2.48	0.000	1.62	3.79
Household composition (ref. Both parents)				
Single-parent family or other	1.92	0.009	1.18	3.14
Grade at school (ref. 1) [(a)]				
2	0.86	0.559	0.51	1.44
3	0.47	0.004	0.28	0.78
4	0.41	0.004	0.22	0.75
Study path (ref. Repeating student)				
Non-repeating student	1.07	0.823	0.61	1.86
Interaction with classmates during free time (ref. Yes)				
No	1.17	0.532	0.71	1.93
Family interest in education (ref. No)				
Yes	0.87	0.483	0.58	1.29
Importance of study for the student (ref. 1) [(a)]				
2	1.66	0.138	0.85	3.23
3	1.30	0.337	0.76	2.20
4	1.48	0.221	0.79	2.76
Degree of urbanisation of the area where the high school is located (ref. Densely populated areas)				
Intermediate density areas	1.02	0.916	0.65	1.60
Thinly populated areas	0.47	0.238	0.14	1.64
_cons	0.15	0.012	0.03	0.66
No academic expectations and university enrolment				
Migrants' country of origin (ref. Romania)				
HDC	0.85	0.858	0.15	4.83
Other HMPC	1.55	0.319	0.65	3.69
Albania	0.67	0.407	0.26	1.72
Ukraine	0.75	0.664	0.21	2.74
Moldova	1.89	0.259	0.63	5.68
China	0.76	0.761	0.13	4.51
Philippines	0.36	0.253	0.06	2.08
Morocco	0.92	0.914	0.20	4.28
Ecuador	0.96	0.959	0.24	3.86
Peru	0.27	0.065	0.07	1.08
Migrant generation (ref. Born in Italy)				
1.75	0.65	0.424	0.23	1.85
1.5	0.46	0.089	0.18	1.13
1.25	1.25	0.622	0.51	3.05
Sex (ref. Men)				
Women	0.81	0.494	0.44	1.49
Parents highest educational level (ref. None, Primary, Lower-sec.)				
Upper-secondary	0.56	0.174	0.24	1.29
Tertiary	0.31	0.032	0.10	0.90
Do not know	0.55	0.317	0.17	1.79
Type of high school (ref. General)				

Table A-5: (Continued)

	RRR	p-value	95% CI	
Academic expectations and university enrolment		Reference		
No academic expectations and university enrolment				
Technical or Vocational	3.17	0.000	1.72	5.83
Household composition (ref. Both parents)				
Single-parent family or other	1.11	0.729	0.61	2.02
Grade at school (ref. 1) [a]				
2	0.54	0.141	0.24	1.23
3	0.46	0.018	0.24	0.87
4	0.45	0.071	0.19	1.07
Study path (ref. Repeating student)				
Non-repeating student	0.94	0.855	0.48	1.84
Interaction with classmates during free time (ref. Yes)				
No	2.11	0.029	1.08	4.14
Family interest in education (ref. No)				
Yes	0.60	0.102	0.33	1.11
Importance of study for the student (ref. 1) [a]				
2	0.62	0.238	0.28	1.37
3	0.53	0.099	0.25	1.13
4	0.37	0.018	0.16	0.85
Degree of urbanisation of the area where the high school is located (ref. Densely populated areas)				
Intermediate density areas	1.23	0.497	0.67	2.26
Thinly populated areas	1.02	0.969	0.36	2.87
_cons	0.55	0.498	0.10	3.10
No academic expectations and no university enrolment				
Migrants' country of origin (ref. Romania)				
HDC	0.55	0.150	0.25	1.24
Other HMPC	0.76	0.290	0.46	1.26
Albania	0.51	0.024	0.28	0.92
Ukraine	0.45	0.070	0.19	1.07
Moldova	0.41	0.071	0.16	1.08
China	0.22	0.030	0.06	0.86
Philippines	0.32	0.041	0.11	0.95
Morocco	0.90	0.746	0.48	1.70
Ecuador	0.28	0.012	0.11	0.76
Peru	0.02	0.000	0.00	0.06
Migrant generation (ref. Born in Italy)				
1.75	1.27	0.503	0.63	2.59
1.5	1.83	0.065	0.96	3.48
1.25	2.38	0.024	1.12	5.04
Sex (ref. Men)				
Women	0.66	0.037	0.44	0.98
Parents highest educational level (ref. None, Primary, Lower-sec.)				
Upper-secondary	0.45	0.000	0.30	0.67
Tertiary	0.20	0.000	0.11	0.35
Do not know	1.13	0.763	0.51	2.51
Type of high school (ref. General)				
Technical or Vocational	14.76	0.000	8.83	24.66
Household composition (ref. Both parents)				

Table A-5: (Continued)

	RRR	p-value	95% CI	
Academic expectations and university enrolment		Reference		
No academic expectations and no university enrolment				
Single-parent family or other	1.29	0.250	0.83	2.00
Grade at school (ref. 1) [(a)]				
2	0.55	0.025	0.32	0.93
3	0.38	0.000	0.26	0.55
4	0.08	0.000	0.04	0.16
Study path (ref. Repeating student)				
Non-repeating student	0.58	0.002	0.41	0.82
Interaction with classmates during free time (ref. Yes)				
No	2.23	0.002	1.35	3.69
Family interest in education (ref. No)				
Yes	0.89	0.548	0.61	1.30
Importance of study for the student (ref. 1) [(a)]				
2	0.68	0.121	0.42	1.11
3	0.51	0.020	0.29	0.90
4	0.32	0.000	0.19	0.54
Degree of urbanisation of the area where the high school is located (ref. Densely populated areas)				
Intermediate density areas	1.36	0.197	0.85	2.18
Thinly populated areas	3.47	0.010	1.35	8.93
_cons	1.22	0.707	0.43	3.48

Note: [(a)]The variable is classified according to the quartiles of the distribution. Q1 refers to the lowest grades or lowest importance. HDC refers to students coming from Highly Developed Countries; Other HMPC refers to students coming from other High Migratory Pressure Countries.
Source: Authors' elaboration of 2015 ISG and ANS-MUR data.

Table A-6: Adjusted predicted probabilities of students' expectations–enrolment by migrants' region/country of origin

Academic expectations and university enrolment				
	PPs	p-value	83.5% CI	
Migrant country of origin				
HDC	0.303	0.000	0.230	0.375
Other HMPC	0.280	0.000	0.245	0.316
Albania	0.364	0.000	0.321	0.406
Romania	0.296	0.000	0.264	0.328
Ukraine	0.391	0.000	0.315	0.466
Moldova	0.385	0.000	0.310	0.460
China	0.433	0.000	0.320	0.547
Philippines	0.407	0.000	0.307	0.508
Morocco	0.300	0.000	0.243	0.356
Ecuador	0.434	0.000	0.347	0.521
Peru	0.616	0.000	0.516	0.716

Academic expectations and no university enrolment				
	PPs	p-value	83.5% CI	
Migrant country of origin				
HDC	0.266	0.000	0.183	0.348
Other HMPC	0.216	0.000	0.179	0.254
Albania	0.169	0.000	0.130	0.208
Romania	0.136	0.000	0.103	0.170
Ukraine	0.141	0.000	0.094	0.189
Moldova	0.111	0.002	0.061	0.162
China	0.209	0.006	0.103	0.314
Philippines	0.208	0.000	0.136	0.280
Morocco	0.157	0.000	0.103	0.210
Ecuador	0.145	0.002	0.081	0.210
Peru	0.287	0.000	0.195	0.379

No academic expectations and university enrolment				
	PPs	p-value	83.5% CI	
Migrant country of origin				
HDC	0.045	0.164	0.000	0.091
Other HMPC	0.070	0.000	0.048	0.092
Albania	0.043	0.002	0.024	0.062
Romania	0.045	0.001	0.025	0.064
Ukraine	0.053	0.030	0.019	0.087
Moldova	0.127	0.010	0.059	0.196
China	0.068	0.073	0.015	0.120
Philippines	0.029	0.105	0.004	0.054
Morocco	0.043	0.109	0.006	0.080
Ecuador	0.081	0.044	0.025	0.138
Peru	0.048	0.059	0.013	0.083

No academic expectations and no university enrolment				
	PPs	p-value	83.5% CI	
Migrant country of origin				
HDC	0.386	0.000	0.308	0.465
Other HMPC	0.433	0.000	0.396	0.470
Albania	0.424	0.000	0.381	0.467
Romania	0.523	0.000	0.481	0.565
Ukraine	0.415	0.000	0.329	0.501
Moldova	0.377	0.000	0.273	0.480
China	0.290	0.001	0.170	0.410
Philippines	0.356	0.000	0.248	0.463
Morocco	0.501	0.000	0.445	0.556
Ecuador	0.339	0.000	0.239	0.440
Peru	0.049	0.062	0.013	0.086

Note: Results from the multinomial logistic regression model weighted and adjusted for sex, parents' highest educational level, type of high school, household composition, grade at school, study path, interaction with classmates during free time, family's interest in education, the importance of study for the student, the degree of urbanisation of the area where the high school is located. Predicted probabilities refer to the population average. 83.5% CI. HDC refers to students coming from Highly Developed Countries; Other HMPC refers to students coming from other High Migratory Pressure Countries.
Source: Authors' elaboration of 2015 ISG and ANS-MUR data.