

## IMMIGRANT SELECTIVITY AND SECOND GENERATION EDUCATION IN ITALY: AN ASPIRATION SQUEEZE?

### SELECTIVIDAD DE LOS INMIGRANTES Y EDUCACIÓN DE LA SEGUNDA GENERACIÓN EN ITALIA: ¿UNA BRECHA DE ASPIRACIONES?

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#### ABSTRACT

Theories of immigrant selection posit that immigrants' pre-migration social standing may explain their children's educational outcomes. However, this has only been tested in Nordic and Western European countries, where the children of immigrants perform especially well in education. Moreover, few studies investigate the impact of selection on different educational outcomes. Using the 2015 Italian survey 'Integration of the Second Generation', we investigate whether (a) immigrant parents are more educated than similar individuals in their countries of origin (positively selected); (b) selection is associated with children's school grades, attitudes, and aspirations; (c) selection explains educational differences across immigrant groups. We find wide variation in educational selectivity between origin groups. In line with prior evidence, educational selectivity is associated with higher educational aspirations but not school grades, which may lock the second-generation into an "aspiration squeeze", with ambitious goals but lower means to attain them.

**KEYWORDS:** immigrant selection; relative education, aspiration squeeze, aspiration paradox, Italy

#### RESUMEN

Las teorías de la selectividad inmigrante sugieren que la posición social previa a la migración afecta los resultados educativos de los hijos. Estas teorías se han probado principalmente en países nórdicos y de Europa occidental, donde los hijos de inmigrantes suelen tener un buen desempeño académico. Utilizando la encuesta italiana "Integración de la Segunda Generación", este estudio analiza si: (a) los padres inmigrantes tienen un nivel educativo superior al de individuos similares en sus países de origen; (b) la selectividad educativa de los padres está asociada con las calificaciones escolares, actitudes y aspiraciones de los hijos; y (c) si la selectividad explica las diferencias educativas entre grupos de origen. Los resultados muestran variaciones en la selectividad educativa entre los grupos de origen. La selectividad está asociada con mayores aspiraciones educativas, pero no con mejores calificaciones, creando una "brecha de aspiraciones" en la que los hijos tienen altas ambiciones pero medios insuficientes para alcanzarlas.

**PALABRAS CLAVE:** selectividad inmigrante; educación relativa; brecha de aspiraciones; paradoja de las aspiraciones; Italia

## INTRODUCTION

A large literature documents a sizable and unexplained variation in the educational success of the children of immigrants. This includes both wide differences across national origin groups, as well as “paradoxical” advantages that are sometimes documented vis-à-vis children without an immigrant background (Ferrara and Luthra 2024; Heath et al. 2008). One reason for such unexplained variation is that standard models of intergenerational transmission of education use immigrants’ socioeconomic conditions in the country of destination to explain their children’s educational outcomes (Heath et al. 2008; Ichou 2014). While this approach (partly) captures the material resources available to immigrant families to support their children’s education, it overlooks potentially large variation in immigrant parents’ social position in their country of origin (Beauchemin 2014; Engzell 2019; Ichou 2014). The latter is not fully reflected by the socioeconomic attainment in the destination country due to constraints such as the devaluation of immigrants’ skills, language barriers, and discrimination. However, it may have substantial unobserved effects on their children’s educational outcomes.

Several studies have used *relative education* (or *educational selectivity*)—the relative position of immigrants in the educational distributions of their countries of origin—as a proxy for immigrants’ pre-migration social position (Borgen and Hermansen 2023; Engzell 2019; Feliciano and Lanuza 2017; Ichou 2014). The intuition is that some immigrants with average or low levels of education relative to the destination country context might be relatively highly educated compared to their non-migrant peers in their country of origin. This pre-migration relative advantage is likely associated with additional unobservable resources (social, economic, attitudinal, or other), which can boost the educational outcomes of children (Ichou 2014). Some studies have shown that higher relative education is associated, net of absolute education and occupation, with children’s higher educational attainment (Feliciano and Lanuza 2017; Ichou 2014) and lower early school dropout (Brunori et al. 2020), whereas others have shown higher parental relative education to be associated with higher educational *aspirations* among children of immigrants, but not with higher grades or attainment (Engzell 2019; Ferrara and Luthra 2024). This might be because the benefits of immigrants’ higher educational selectivity are trumped by structural constraints, such as their lower socioeconomic status and discrimination.

In this article, we test whether parental relative education is associated with better educational outcomes among the children of immigrants in Italy, a country which differs from most European high-immigration countries in the educational outcomes of immigrants’ children. Studies on the impact of parental relative education on the second generation have mostly focused on European countries where the latter tends to have higher educational aspirations and to make more ambitious educational choices (Birkelund 2020; Fernández-Reino 2016; Ferrara 2023; Kilpi-Jakonen 2011). In contrast, an OECD report on immigrant-origin students found that their educational aspirations are significantly lower in Southern and Eastern European countries (OECD 2018), although some found the children of immigrants to have more ambitious educational aspirations than native-origin students in Spain—net of achievement and socioeconomic status (Gil-Hernández and Gracia 2018). The finding of low educational aspirations for immigrant-background students is supported in several studies on the Italian context (Azzolini and Barone 2013; Barban and White 2011; Ferrara and Brunori 2024), which also report substantial unexplained heterogeneity in the outcomes of immigrant-origin students across origin groups. Beyond educational aspirations, immigrant-origin students in Italy and in other Southern European countries are also especially disadvantaged in terms of academic achievement (OECD 2018; Schnell and Azzolini 2015; Triventi et al. 2022).

The adverse experience of the second generation in newer migration contexts like the Italian one begs the questions of whether, in such countries, (a) immigrants are less positively selected than in other destination countries or (b) whether the benefits of their selection are not as easily realized. Prior literature on immigrants in Italy suggests that, on average, they tend to rank highly in their country of origin educational distributions, albeit less so than in other destination countries (Brunori et al. 2020). The authors also find that higher relative education reduces the likelihood of school dropout for their children; however, they cannot observe further educational outcomes. In addition, this study is based on data from 2011, which was a period of rapid expansion of the immigrant population in Italy, when children born in Italy from immigrant parents (the second generation)

were only a small minority among school children.<sup>1</sup> In this study we investigate (a) the extent to which immigrant parents in Italy are positively selected in terms of education, (b) the impact of such selectivity on a variety of educational outcomes for their children, and (c) the extent to which differences in selectivity drive differences in children's educational outcomes across origin groups.

Beyond the specific relevance for the Italian case and the one of similar immigrant destinations, we also contribute to the overall literature on immigrant selectivity and its consequences. The mechanisms through which educational selectivity impacts children's outcomes are still debated. In the case of Sweden, Engzell (2019) shows that parents' relative education boosts children's educational goals, perhaps due to the desire to reproduce their parents' relative standing in their countries of origin, but it does not affect their academic skills and achievement, leaving them in an "aspiration squeeze". However, this finding has not been replicated in other contexts, since most other studies focus only on one educational outcome (usually final attainment). We test the aspiration squeeze hypothesis in Italy by investigating the impact of immigrant parents' relative education on the school grades, attitudes, and aspirations of their children.

We use data from the 2015 "Integration of the Second Generation" (ISG) survey, administered by the Italian National Institute of Statistics (ISTAT), and select the children who have two immigrant parents and who are enrolled in lower secondary education (Grades 6 to 8, typically from age 11 to age 14). Measuring immigrant selectivity requires a multi-sited approach that allows us to compare immigrants to non-migrants in their country of origin. To this end, we use data from the Barro-Lee Educational Attainment Dataset, covering educational distributions in about 150 countries (Barro and Lee 2013). With these data, and information on immigrants' educational qualifications, we are able to compute immigrants' relative position in the educational distributions in their country of origin (for individuals with the same gender and in the same age group). After examining the educational selectivity of parents, we investigate its impact on the educational outcomes of their children, including their school grades, attitudes towards school, and educational aspirations. Finally, we investigate to what extent selectivity mediates differences in outcomes across origin groups.

Our analyses paint a varied picture of the educational selectivity of immigrant parents in Italy, with some groups being highly positively selected despite low absolute attainment, some having relatively high educational attainment but being negatively selected, and some others being negatively selected and having low absolute levels of education. In line with the aspiration squeeze argument, we find that relative education has a strong and statistically significant association with educational *aspirations*—net of absolute education and other control variables—but not on school grades and attitudes. We find that selectivity does not contribute substantially to explaining the differences in educational outcomes across origin groups.

## BACKGROUND

### The education of children of immigrants

Immigrants face substantial disadvantages including linguistic barriers, discrimination, the poor transferability of resources, and more. This is reflected in the documented disadvantage that they face in destination country labor markets (Heath et al. 2008; Heath and Cheung 2007). Their descendants are expected to have better outcomes because they are raised (at least partially) in the destination country and should face reduced adversities. Their education is argued to be a key stepping stone in the path to upward mobility and integration in destination countries (Alba et al. 2011).

Despite reduced barriers, the performance of the second generation is somewhat mixed. On the one hand, children of immigrants tend to have lower *academic achievement* (i.e. school grades) than the children of natives across most destination countries (Brinbaum and Cebolla-Boado 2007; Heath and Brinbaum 2007; OECD 2018; Schnell and Azzolini 2015; Schnepf 2007; Triventi et al. 2022; Van De Werfhorst and Van Tubergen 2007). On the other hand, in various countries, they often hold higher educational aspirations and are more likely to enroll in more demanding academic tracks compared to their native peers with a similar level of achievement and socioeconomic background. This has been shown in many established immigration countries, including Denmark (Birkelund 2020), England (Fernández-Reino 2016; Jackson et al. 2012), France (Brinbaum and Cebolla-Boado 2007; Ferrara 2023), Germany (Dollmann and Weißmann 2020), the Netherlands (Van De Werfhorst and Van Tubergen 2007) and Norway (Borgen and Hermansen 2023), but also in countries that

1. In the school year 2010/2011, only 24% of the children of immigrants attending lower secondary school were born in Italy, versus 44% in 2014/2015 (Santagati and Ongini 2016).

have experienced an increase in immigration in recent years such as Finland (Kilpi-Jakonen 2011) and Spain (Gil-Hernández and Gracia 2018), although literature on the latter is mixed (e.g. Cebolla-Boado et al. 2021; de Miguel-Luken and Solana-Solana 2017). In some countries, such as Norway, the United Kingdom, and the United States, children of immigrants have a similar or even higher level of educational attainment compared to children of natives (Feliciano and Lanuza 2017; Hermansen 2016; Zuccotti 2015; Zuccotti and Platt 2023).

In other countries, however, the picture is less mixed, and the disadvantages that immigrant-origin students experience are stark. In Italy, children of immigrants tend to have lower school grades, educational aspirations and attainment, and are less likely to follow an ambitious educational track (Brunori et al. 2020; Ferrara and Brunori 2024; Triventi et al. 2022) compared to native-origin students. While these disadvantages are especially significant for children born abroad (the 1.5 generation) (Ferrara and Brunori 2024; Triventi et al. 2022), the second generation also tend to have lower grades than Italian-origin students (Triventi et al. 2022), and to not present the high aspirations pattern found in other destination countries (Ferrara and Brunori 2024). Beyond averages, much like in other destination countries, there is significant and only partially explained variation in outcomes across immigrant-origin groups in Italy (Ferrara and Brunori 2024; Heath et al. 2008). The most recent study on this (Ferrara and Brunori 2024) found that among the second generation there are groups, such as those whose parents came from former Soviet Union countries, Sub-Saharan Africa, or Latin American and the Caribbean, that align with the high aspirations trend found in other countries, while others, such as children of Albanian, Romanian, Moroccan and EU immigrants, have similar aspirations to Italian-origin children. Yet other groups, such as children of Chinese, Balkan (excluding Albanian and Romanian) and Southeast Asian immigrants, were found to have lower educational aspirations compared to Italian-origin students with a similar level of achievement and socioeconomic background.

Some mechanisms have been proposed to explain the specificities of the Italian case, including rules on legal stay, segmented labor markets for migrants, language barriers, and discrimination by school teachers (Bonizzoni et al. 2016; Fellini and Guetto 2019; Ferrara and Brunori 2024; Pastore 2008). However, these factors cannot, or can only partially, explain differences by country of origin among children of immigrants. In this study, we investigate the role of a previously overlooked mechanism in the Italian and more broadly Southern European context: immigrant selectivity.

### Immigrant selectivity and the second generation

A large literature explains the educational outcomes of the second generation through *immigrant selection*: migrants are expected to be positively selected in terms of some relevant characteristics (skills, health, resources, etc.) in their countries of origin, with implications for their children's education (Chiswick 1999; Feliciano 2005). Immigrants' pre-migration position is not fully reflected in their post-migration socioeconomic attainment due to the downgrading of their skills, insufficient linguistic proficiency, relative lack of social capital, and discrimination. However, it is expected to affect their children's aspirations and outcomes. Since migration research is mostly carried out with survey data from destination countries, we can rarely observe immigrants' characteristics before migration, and such mechanisms usually remain unobserved (Beauchemin 2014; Feliciano 2020). Investigating the consequences of immigrant selection requires a multi-sited approach, which is able to (a) measure immigrants' selection (or relative position) in their country of origin and (b) estimate its impact on their children's outcomes at destination (Feliciano 2020).

A major turning point in this literature came with the seminal work on educational selectivity by Ichou (2014). The key intuition behind educational selectivity is that immigrants' educational qualifications remain relatively constant following migration and over the life course, although the relative value of those qualifications may change drastically from origin to destination countries, and signal very different social positions. The assumption is that immigrants' *educational selectivity*—that is their relative rank in the educational distribution *in their countries of origin*—can be taken as a proxy of their pre-migration social status. The measure thus attempts to resolve the issue of having to actually observe immigrants' status before migration, which is rarely measured in surveys.

The literature has identified two main mechanisms through which immigrants' educational selectivity can affect the educational outcomes of their children. First, since immigrants often experience social downgrading after migration (Engzell and Ichou 2020; Ichou 2024), educational selectivity is expected to capture their pre-migration social status and more accurately predict immigrants' aspirations for their children compared to socioeconomic conditions in the residence country. Following known mechanisms of status reproduction (Breen

and Goldthorpe 1997), migrants who had a high social position in their country of origin will aim to reproduce a similar class position in the destination country (Feliciano and Lanuza 2017). Relatedly, immigrants could be selected on personality traits, such as optimism, motivation, or perseverance (Cebolla-Boado et al. 2021; Polavieja et al. 2018), which would also be captured by educational selectivity and associated with seeking higher status in the destination country (Cebolla-Boado et al. 2021). Parental aspirations strongly shape the aspirations of immigrant-origin children (Portes et al. 2013), although they are not always aligned (Cebolla-Boado et al. 2021). These mechanisms would be more closely linked to the high aspirations and ambitious educational track choices of the children of immigrants, what is often referred to as “secondary effects” in the literature on educational inequalities (Jackson 2013).

The second mechanism is more related to skills and human capital. Authors argue that immigrants who are positively selected based on educational attainment at origin should also possess better cognitive and non-cognitive skills, as well as educational resources (e.g. *habitus*), which should boost their children’s performance in school (Feliciano and Lanuza 2017; Ichou 2014)—what is usually referred to as “primary effects” in the sociology of education. This mechanism squares less with the documented outcomes of the children of immigrants since, as outlined before, they tend to be disadvantaged in terms of academic achievement.

The evidence on the impact of selectivity on the children of immigrants, and on these two mechanisms, is mixed. Studies have shown that educational selectivity is associated with overall higher educational attainment for the children of migrants in the USA and France (Feliciano and Lanuza 2017; Ichou 2014), although Ferrara and Luthra (2024) find contrasting evidence in the UK. There is also some evidence for the first mechanism: the children of more positively selected migrants in Italy tend to stay longer in school (Brunori et al. 2020), while in Sweden they tend to enroll in more demanding educational paths (Engzell 2019). However, Borgen and Hermansen (2023) find no association between parental educational selectivity and the postsecondary field of study choices of immigrant-origin individuals.

The evidence on the second mechanism, through academic achievement and skills, is especially limited. Engzell (2019) is the only study that simultaneously tests the two mechanisms by investigating the impact of educational selectivity on a wide range of educational outcomes, including school grades, attitudes towards school, career aspirations, and educational track choices. The author finds a strong relationship between educational selectivity and aspirations/choices, but no relationship with academic achievement and skills. Engzell concludes that immigrants’ educational selectivity equips their children with strong desires for upward mobility and to reproduce a high subjective social status (the first mechanism), but not with the higher skills or academic resources to pursue them. They are thus left in a bind, which he calls the “aspiration squeeze” (Engzell 2019). This pattern is consistent with the evidence of high aspirations but low academic achievement common to immigrant-origin students in many destination countries (OECD 2018).

### Contributions and hypotheses of the present study

In this study we aim to understand whether immigrant parents are positively selected in terms of education in Italy, and whether this explains the educational outcomes of their children. Our research is not only relevant to better understand the relatively understudied Italian context, but it also contributes to the overall literature on immigrant selectivity and its consequences in two ways. First, we simultaneously investigate the impact of educational selectivity on a wide set of educational outcomes, including school grades and educational aspirations, thereby testing some of the mechanisms outlined above, as previously done only by Engzell (2019). Second, while Engzell (2019) studies a “best case scenario of what can be achieved with generous public services, fully subsidized education, and a system with few academic dead ends” (p. 98), we investigate a case, Italy, where migrants face higher constraints and where the impacts of their positive selection may be harder to realize (Ferrara and Brunori 2024).

Our study is structured in three parts. First, we investigate whether immigrant parents in Italy are positively selected in terms of education. Studies on other high immigration countries in Europe have found most immigrant origin groups to be positively selected in terms of education compared to the non-migrant populations at origin—for example in France (Ichou 2014), Sweden (Engzell 2019), and the United Kingdom (Ferrara and Luthra 2024). However, the immigration regimes and labor market opportunities for immigrants in these countries differ from the Italian ones in important ways. Italy has historically attracted non-EU immigrants, primarily thanks to its loose immigration controls (Van Mol and de Valk 2016), rare repatriation enforcement (Leerkes and Van Houte 2020), and large underground economy allowing irregular immigrants to easily access

employment (Reyneri 1998). Additionally, compared to other European destinations with stricter immigration regulation and enforcement, Italy is characterized by very high labor market segmentation, where non-EU immigrants are persistently segregated in the secondary and irregular labor markets (Fellini and Guetto 2019). Consequently, we expect immigrants to be less positively selected than in other European destination countries, with substantial variation in the level of selectivity across origin groups. These expectations are in line with some previous studies on Italy (Brunori et al. 2020).

H1: The level of educational selectivity varies across origin groups, with some being negatively and some positively selected.

Second, we investigate whether immigrant parents' relative education is associated with the educational outcomes of their children. We investigate outcomes more closely related to academic skills, such as school grades, and outcomes tied to school attitudes and expectations. In line with Engzell (2019), we expect to see an effect of immigrant selectivity on children's aspirations and attitudes towards school, but not on their academic achievement.

H2: Higher parental relative education is associated with children's more positive educational aspirations and school attitudes but not to better school achievement, net of controls.

Finally, we investigate whether, given origin group differences in educational selectivity (H1) and the expected impact of parental relative education on (some) children's educational outcomes (H2), group differences in level of immigrant selectivity account for (i.e., mediate) differences in educational outcomes between children with different countries of origin.

H3: Differences in immigrant selectivity across origin groups explain (i.e., mediate) part of the differences in educational outcomes of their children.

## CHILDREN OF IMMIGRANTS IN THE ITALIAN EDUCATIONAL SYSTEM

Children of immigrants until the age of 16 are subject to the same right and obligation to schooling as Italian citizens, independently of their and their parents' legal status (or lack thereof) in Italy.<sup>2</sup> However, there is no centralized program or funding to guarantee children of immigrants' academic integration, meaning that the provision of Italian language courses to immigrant children and of orientation to guarantee immigrant parents' understanding of the Italian school system depends on location. School dropout before age 16 is, in principle, illegal<sup>3</sup>, but it is still not an uncommon occurrence, especially among children of immigrants: according to the Italian Ministry of Education, in the academic year of 2015–2016, 0.8% of students enrolled in lower secondary education (Grades 6 to 8) dropped out of the educational system during the school year or when changing from one grade of lower secondary school to the next, as well as 1.6% of students who graduated from lower secondary school. The last figure reaches 5.7% among children of immigrants (MIUR, 2017).

The Italian school system is comprehensive until Grade 8 (age 14), when children choose whether to enroll in the academic, technical, or vocational track of upper secondary education—or, much less commonly, in a regional apprenticeship program. While all upper secondary school tracks give access to tertiary education, the vocational and, to a lesser degree, technical tracks are more oriented to prepare students to directly enter the job market after completion.

Admission to upper secondary school tracks is not explicitly tied on previous achievement nor is there an admission exam, so children (families) are in principle free to choose any track. However, during after Grade 8, children receive a non-binding formal track recommendation from teachers, which has been shown to be particularly influential for families with an immigrant background, partly due to their limited knowledge of the Italian school system (Perino and Allasino 2014).

2. Article 38 of the “Unique Text on Immigration” Decree 286/1998 (*Testo Unico sull’Immigrazione D.lgs. n. 286/1998*)

3. Article 731 of the Penal Code (*Articolo 731 del Codice Penale*)

## DATA AND METHODS

### Data

We used data from the 2015 “Integration of the Second Generation” (ISG) survey, administered by the Italian National Institute of Statistics (ISTAT). The survey includes a stratified sample of 68,217 students enrolled in (lower and upper) secondary schools attended by at least 5 children who were not Italian citizens. The survey was based on a sample of 1,400 secondary schools located in 821 Italian municipalities. For each sampled school, all non-Italian students were interviewed, and a random sample of Italian students were also selected as a control group for the survey. Students were surveyed by means of an online questionnaire that was administered during school hours. The participation rate among schools was 98%, while the response-rate for non-Italian students was 82%.

We focused on students enrolled in lower secondary education (Grades 6 to 8), because they are observed before any decisions regarding educational tracks have been made, which makes their school grades and aspirations for the future more comparable (Guetto et al. 2022). We selected only students with two migrant parents to test the impact of immigrant selection on their outcomes. Following recommendations from Ferrara and Luthra (2024), we excluded the children of two natives because of the high correlation between parental absolute and relative education in this group, which would lead to collinearity issues. We excluded the children of immigrants for whom we lack information on both parents’ country of birth (4% of sample) because we cannot match them with their country-of-origin educational distribution to measure their relative education. We also excluded students lacking information on any of the outcome variables we consider (4% of sample). Missingness was negligible for all other variables of interest except for parental education for which 38% of students answered “I don’t know” for both their parents, which is unsurprising given their relatively young age. Our analytical sample is composed of 7,880 students.

We preferred to drop rather than impute cases with missing parental education for both parents because of the relatively high rate of missingness in this key variable of interest. Although complete case analysis usually leads to reduced statistical power compared to multiple imputation, the latter may also increase uncertainty when missingness is high and the association with other variables is weak (Jakobsen et al. 2017; Madley-Dowd et al. 2019). This appeared to be the case in our data set. We investigated how reporting missing parental education was associated with key socio-demographic covariates in our analyses. Appendix Table A1 shows relatively weak patterns of association with our main independent variables and especially socio-economic indicators. The biggest predictor of missing information was students’ grade in lower secondary education, with students in lower grades being much more likely to report missing information, which is expected given their younger age. This suggests relatively weak patterns of selection into missing information by families’ socio-economic characteristics. We ran some additional analyses to test the robustness of our results where we imputed parental education using multiple imputation with chained equations (White et al. 2011). Analyses and results are presented in Appendix B. Our estimates are comparable in size, albeit slightly less precisely estimated following imputation (see Figure A2); however, our substantive conclusions are unchanged.

Our second data source is the 2021 September update of the Barro-Lee educational attainment dataset<sup>4</sup> (Barro and Lee 2013), which we use to construct the relative education variable. The dataset contains the distribution of educational attainment in six categories (no formal education, incomplete primary, complete primary, lower secondary, upper secondary, and tertiary education) in the adult population of 146 countries from 1950 to 2015, split by gender and ten-year age groups.

### Outcome variables

We consider three sets of outcome variables. The first covers academic skills and includes students’ math and Italian grades obtained in the last report card as reported by the students and ranging from 1 to 10 (lowest to highest).

The second covers two measures of students’ and their parents’ attitudes towards schooling, as reported by the students themselves. The first is an indicator of the *importance of studying for the child*, which we measure by averaging the responses to two Likert-based items ranging from 1 (“Fully disagree”) to 5 (“Fully agree”): (i) “studying is important to find a satisfying job” and (ii) “studying is not important, it’s more important to find a

4. Publicly accessible at <http://barrolee.com/?p=103> (visited 05/11/2024)

job and start earning” (we reverse this item). The second is an indicator of parental involvement in students’ education, which we measure by averaging the responses to two Likert-based items ranging from 1 (“Fully disagree”) to 5 (“Fully agree”): (i) “In my family we often talk about what happens in school” and (ii) “My family often asks how I am doing in school.”

The third set of items covers two indicators of students’ educational expectations. The first is a measure of whether students expect to enroll in the academic track of upper secondary education after completion of lower secondary education. While in principle all upper secondary school tracks give access to tertiary education, students in the academic track are by far the most likely to enroll in university education after compulsory education. The second measures whether students do *not* expect to enroll in upper secondary education after Grade 8 or if they are unsure whether they will.

### Parental absolute and relative education

Parental education is reported by students in five categories: “No title,” “Primary education,” “Lower secondary education,” “Upper secondary education,” and “Tertiary education”. We use the dominance criterion and consider the highest between the two parents or, in case of a missing value for one of the two parents, we take the non-missing value.

To build parental relative education (or educational selectivity), we matched our data with the Barro and Lee (2013) data set. Each parent is matched to the educational qualifications among individuals from their same country of birth and with the same gender and year of birth (in ten-year groups) in 2015. Following Ichou (2014), we computed the relative education of each parent as the percentage of individuals from the same country of origin, of the same gender and birth cohort (in ten-year groups) with lower educational levels, plus half of those with the same educational level. This measure ranges from 0 to 100, representing the individual’s percentile in the distribution of educational titles among comparable non-migrant individuals from their countries of origin. Any migrant with a relative education above 50 is considered positively selected, since they have a higher level of education than the majority of comparable individuals in their country of origin. We also used the dominance criterion for relative education and considered the highest between the two parents. In the regression analyses, we present the impact of 10-percentage-point (decile) changes in relative education.

### Additional variables

As previously recognized in the educational selectivity literature, for example in Engzell (2019), independent variation between absolute and relative education stems from country differences in educational distributions, which may be confounded with other relevant variables that may affect children’s educational outcomes. To account for that, we included region of origin fixed effects in our models, with the following categories: EU/EEA and other western countries (EU++), Balkans, Former Soviet Union (FSU), Middle East and Northern Africa (MENA), Latin America and Caribbean (LatAm+C), South Asia (SA), China and Southeast Asia (China+SEA), and Sub-Saharan Africa (SSA). We used the same categories to investigate whether selectivity can account for differences in educational outcomes across migrant groups. When the two parents came from different regions, we selected the region of the parent with the highest relative education (cf. Ichou, 2014).

We included a basic set of controls: students’ gender (binary); whether they were born in Italy—i.e. if they belong to the 1.5 generation (binary); their school grade within lower secondary education (3 levels); household composition (intact family, single-parent, single-parent with new partner); the size of the municipality of residence (small or large); and the Italian macro-region of location (North West, North East, Centre, South, Islands).

Finally, we included a set of indicators of family socioeconomic conditions as potential mediators in the association between parental relative and absolute education and children’s educational outcomes: the family’s economic status as reported by the student (rich, average, poor); the number of family possessions (such as car, computer, dishwasher, etc.) in tertiles; and the ratio of household members to rooms in the home in tertiles, with an additional category for communal homes and non-conventional arrangements. All our variables of interest are described in Table 1.

**Table 1.** Descriptive statistics

	<b>mean</b>	<b>sd</b>	<b>min</b>	<b>max</b>
Parental relative education	58.31	30.30	0.08	99.96
<b>Parental absolute education</b>				
None	0.12	0.33	0.00	1.00
Primary	0.04	0.19	0.00	1.00
Lower secondary	0.23	0.42	0.00	1.00
Upper secondary	0.39	0.49	0.00	1.00
Tertiary	0.22	0.42	0.00	1.00
<b>Outcome variables</b>				
Math grades (1-10)	6.56	1.08	1.00	10.00
Italian grade (1-10)	6.51	1.34	1.00	10.00
Parents' school involvement (1-5)	4.05	0.90	1.00	5.00
Child school importance (1-5)	4.25	0.79	1.00	5.00
Expect academic track (0-1)	0.42	0.49	0.00	1.00
Expect dropout (0-1)	0.08	0.27	0.00	1.00
<b>Origin Region</b>				
EU++	0.21	0.41	0.00	1.00
Former Soviet Union	0.05	0.22	0.00	1.00
Balkans	0.22	0.42	0.00	1.00
Middle East and North Africa	0.21	0.41	0.00	1.00
Sub-Saharan Africa	0.06	0.24	0.00	1.00
Latin America and Caribbean	0.08	0.27	0.00	1.00
China + Southeast Asia	0.10	0.30	0.00	1.00
South Asia	0.07	0.25	0.00	1.00
<b>Control variables</b>				
Female	0.49	0.50	0.00	1.00
Born in Italy	0.52	0.50	0.00	1.00
<i>Household composition</i>				
Intact family	0.84	0.37	0.00	1.00
Single-parent	0.11	0.31	0.00	1.00
Single-parent + partner	0.06	0.24	0.00	1.00
<i>Region</i>				
North East	0.38	0.48	0.00	1.00
North West	0.25	0.44	0.00	1.00
Center	0.25	0.43	0.00	1.00
South	0.08	0.27	0.00	1.00
Islands	0.04	0.20	0.00	1.00
Large municipality	0.15	0.35	0.00	1.00
<b>Extra SES controls</b>				
Home Possessions	6.27	1.15	0.00	8.00
<i>Reported wealth</i>				
Rich	0.16	0.37	0.00	1.00
Middle	0.78	0.42	0.00	1.00
Poor	0.06	0.24	0.00	1.00
<i>People per room</i>				
Top tertile	0.32	0.47	0.00	1.00
Middle Tertile	0.37	0.48	0.00	1.00
Bottom tertile	0.24	0.43	0.00	1.00
Non-conventional housing	0.07	0.25	0.00	1.00
Observations	7880			

Notes: Weighted estimates except for case numbers. Source: ITA2GEN survey, own calculations

## Analytical strategy

We performed three sets of analyses. First, to address H1, we describe immigrant educational selectivity among migrant parents in Italy, both overall and by origin region. We also provide a description of immigrant relative and absolute education to elucidate the theoretical difference and separate variation between the two.

Second, to address H2, we investigate the impact of parental educational selectivity on children's educational outcomes and whether it remains robust with the inclusion of our controls. We fit OLS models sequentially, controlling for our demographic controls (M1); origin region fixed effects (M2); parental absolute education (M3); and family socioeconomic conditions (M4). We also fit OLS (i.e., linear probability) models for our binary outcomes because they are relatively non-rare events (Hellevik, 2009) and OLS coefficients can be easily compared across model specifications (Mood, 2010). For robustness, we also run logistic models, which we present in the appendix.

Third, to address Hypothesis H3, we measure differences in educational outcomes across migrant origin groups. We first fit a model including basic set of controls, parental absolute education, and family socioeconomic conditions (M1). Then, we additionally control for parental relative education (M2). We are interested in whether the inclusion of parental relative education significantly changes origin group differences compared to the first model. To that end, we also run a more formal test of whether selectivity mediates group differences net of other covariates by applying the widely used KHB decomposition method (Karlson et al. 2012; Karlson and Holm 2011). This method tests whether the inclusion of our mediator (parental relative education) has a statistically significant impact on origin group differences net of other controls.

## RESULTS

### Educational selectivity of immigrant parents

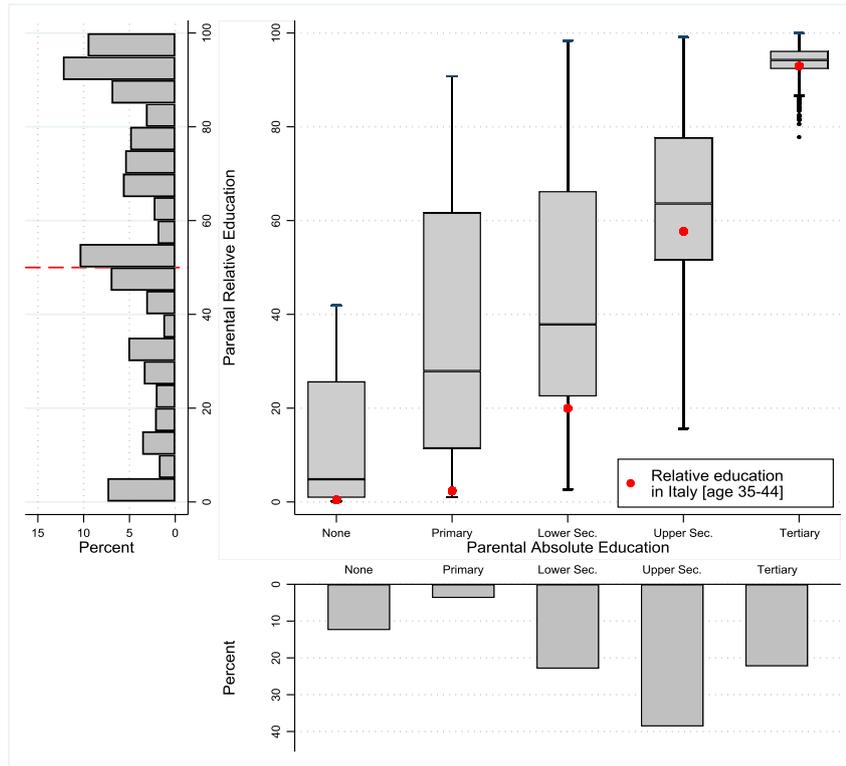
We display the variation in parental absolute and relative education through a boxplot, as recommended in Ferrara and Luthra (2024). Figure 1 shows that there is wide variation in parental relative education within categories of absolute education. This is especially the case for the middle three categories, whereas immigrants with no or tertiary education tend to have similarly high or low levels of relative education. The correlation between the two variables is about 0.82, which is in line with prior studies (Engzell 2019; Feliciano and Lanuza 2017).

In Figure 1, red dots indicate the average rank that migrants would have in the *Italian educational distribution* for each absolute level of education. This shows that for the wide majority of migrants, their relative position in their *country of origin* far exceeds their relative position in Italy. For example, in the Italian context, individuals who completed only primary education are more educated than 2.4% of the population. By contrast, the median immigrant parent with this level of education in our sample is more educated than 28% of their peers in their country of origin, while over one fourth of them are more educated than 58% of individuals in their country of origin. This shows that the face value of immigrant's educational titles in Italy significantly underestimates their relative position in their countries of origin and any potential resources that they may derive from such position.

The average educational selectivity among immigrant parents in our sample is 58% (see descriptive Table 1). In other words, immigrant parents are more educated than 58% of comparable individuals in their countries of origin. This is in line with prior estimates of selectivity among immigrant parents from Italy (Brunori et al. 2020) and France (Ichou 2014), although it is significantly lower than the degree of selectivity recorded in the United States and the United Kingdom, where it is above 70% or 80% on average (Feliciano and Lanuza 2017; Ferrara and Luthra 2024). Results are also in line with a recent comparative article measuring immigrant selectivity among working-age adults (i.e., not specifically migrant *parents*) in Europe (Schmidt et al. 2022). Previous studies have shown that immigrants in Italy are amongst the least selected in European destination countries (Schmidt et al. 2022, Figure 2). However, beyond averages, our results also reveal significant variation in educational selectivity across origin groups.

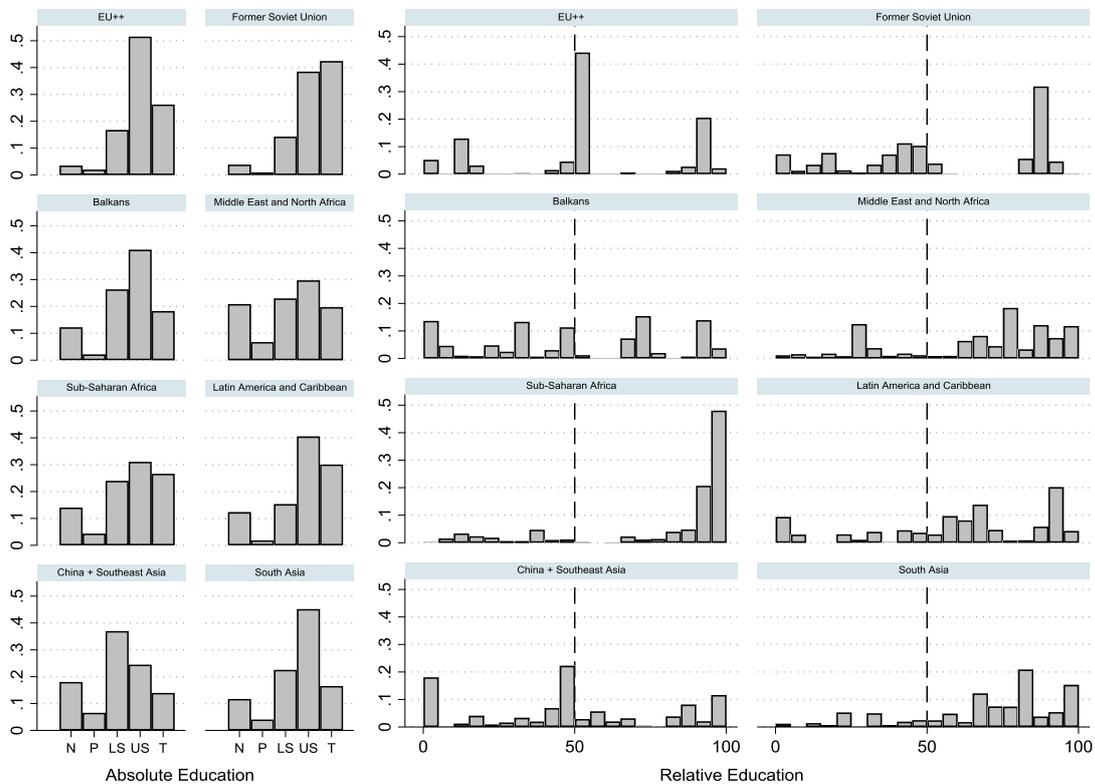
Figure 2 presents the distributions of parental absolute (left side) and relative (right side) education by origin region. The figure illustrates how the origin groups with the highest absolute levels of educational attainment do not necessarily correspond to the most positively selected origin groups, and vice versa. Parents from former Soviet Union countries and from EU and other western countries are the highest educated, but, due to the high level of educational expansion in these countries, most parents in these groups have average (EU and other western countries) or below average (FSU) education compared to the population in the respective countries of origin. On the other hand, parents from the Middle East and Northern Africa are one of the least educated groups in absolute terms, but 80% of the parents in this group are more educated than the median peers in their country of origin (i.e. their relative education is above 50). The most positively selected group are parents from Sub-Saharan Africa, 77% of whom are in the top quintile of educational distributions in their country of origin (relative education equal or higher than 80). Two groups, parents from China (and other Asian countries) and from the Balkans, both have low absolute levels of education in absolute terms and are negatively selected from the educational distribution of their countries of origin. Overall, our results support our Hypothesis H1.

**Figure 1.** Distribution of parental absolute and relative education



Notes: Weighted estimates. Source: ITA2GEN survey, own calculations.

**Figure 2.** Absolute education (left panel) and relative education (right panel) by origin region



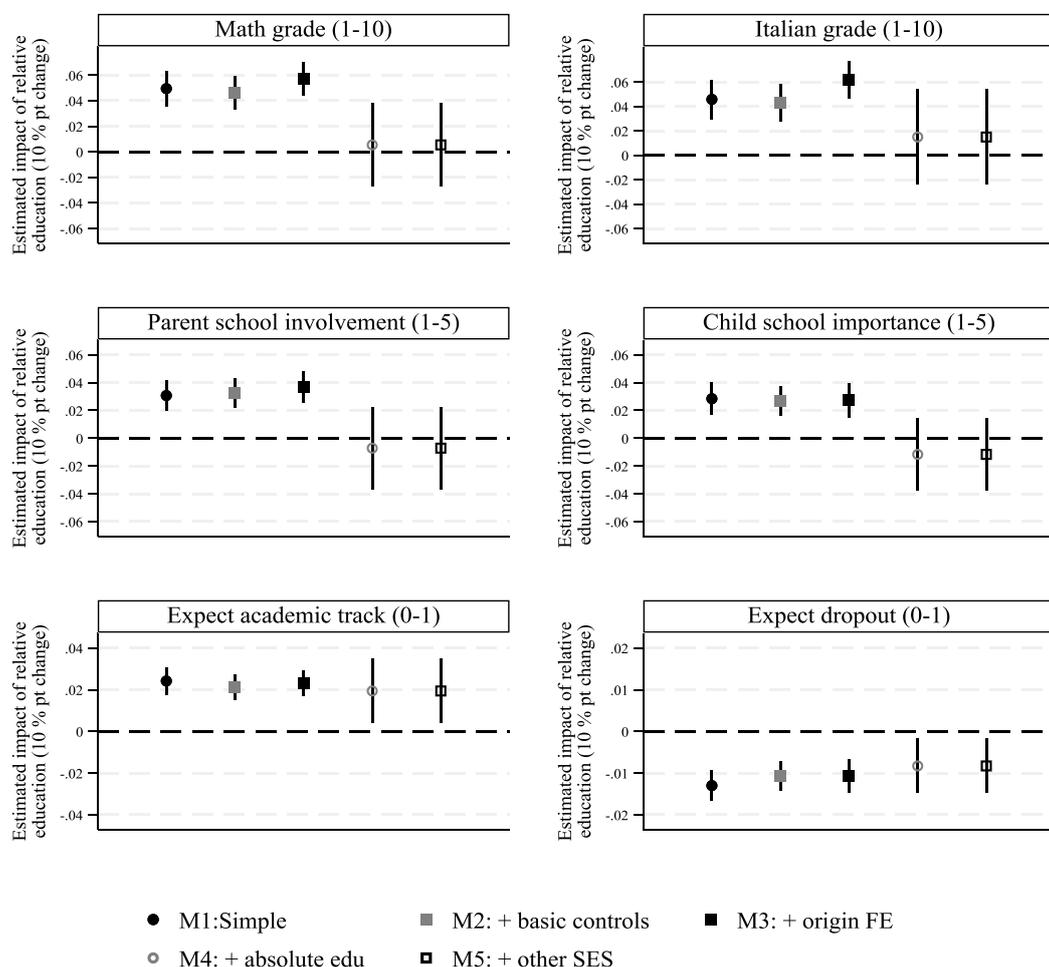
Notes: Weighted estimates. Source: ITA2GEN survey, own calculations.

### Relative education and educational outcomes

In Figure 3 we plot the coefficients from regression models of the educational outcomes (math and Italian grades, parent school involvement, importance attributed to school by the child, expectations to enroll in the academic upper secondary track, and expectations to drop out before upper secondary education) on relative education in deciles, with the stepwise inclusion of demographic characteristics (model 2), region of origin fixed effects (model 3), absolute level of education (model 4), and indicators of socioeconomic status and material conditions (model 5). For the full set of coefficients, see Appendix Tables A1–A6.

In models 1–3, we find a strong and statistically significant association between parental relative education and each educational outcome observed. In the case of grades (math and Italian) and of attitudes towards school (parental involvement and child's perceived importance of school), this association is almost entirely explained by parental absolute education, as the coefficients approach zero once this variable is included in the model. Conversely, parental *absolute education* strongly predicts children's grades, parental involvement in their schooling, and children's attitudes toward school net of parental relative education (see Appendix Tables A1–A4).

**Figure 3.** Impact of parental educational selectivity



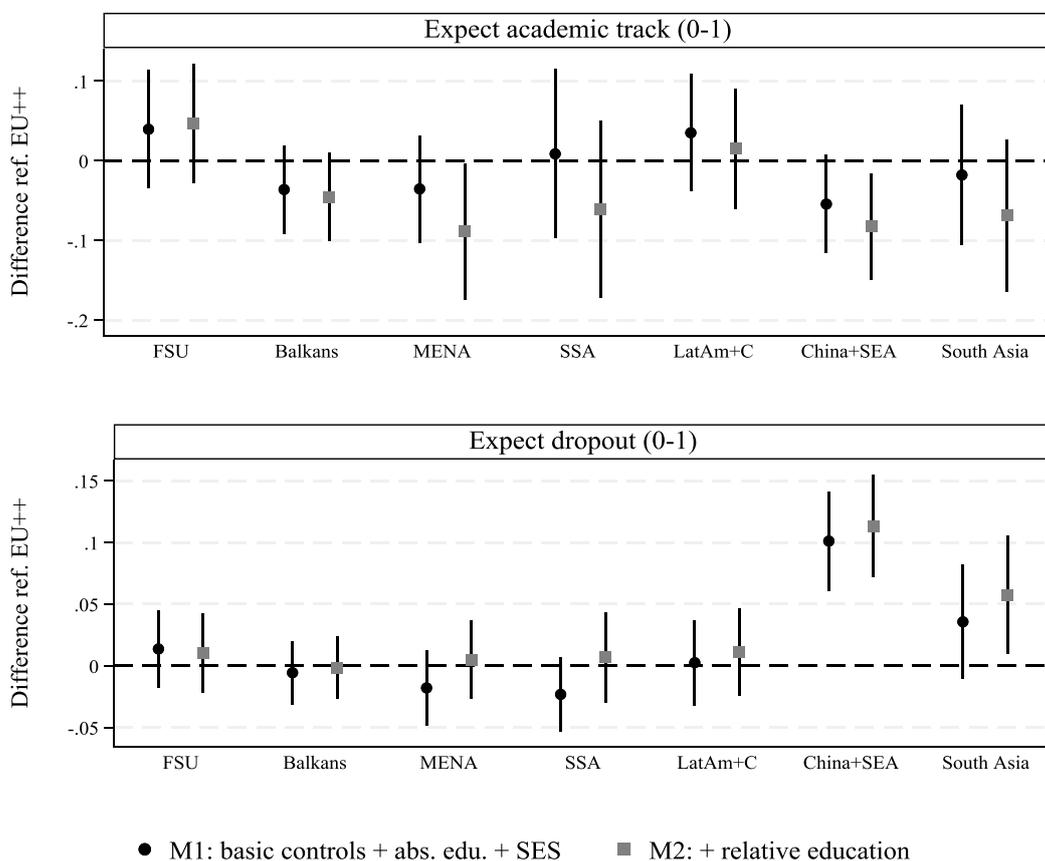
Notes: Weighted estimates from OLS models and 95% confidence intervals. Basic controls include gender, household composition, an indicator for being born in Italy, Italian region of residence, the size of the municipality and the school year attended. Additional SES controls include an indicator of self-reported wealth, a count of items in the house, and an indicator of people per room in the house. Source: ITA2GEN survey, own calculations.

Instead, parental absolute education is not statistically significantly associated with children's educational expectations, nor does its inclusion in model 4 substantially reduce the predicted association between parental

relative education and educational expectations (enrolling into the academic track and dropout): Net of parental absolute education, a 10-percentile difference in parental relative education is associated with a 3-percentage-point higher chance of expecting to enroll in the academic track of upper secondary education, and with a 1-percentage-point lower chance of expecting to drop out after completion of lower secondary education. Finally, family socioeconomic conditions (model 5) do not appear to mediate the association between relative education and educational expectations. Results were substantively the same if we split our sample between 1.5-generation and second-generation students (see Figure A2). These findings are largely in line with the “aspiration squeeze” pattern from Engzell (2019) and support our Hypothesis H2.

Finally, in Figure 4 and Table 2 we test whether compositional differences in parental relative education drive the differences in educational aspirations (expectation to enroll in the academic track and to dropout) between origin groups over and beyond the other controls we employ. Figure 4 presents origin-group differences in aspirations from a first model with our full set of controls and a second model that also includes parental educational selectivity. Table 2 reports KHB estimates of the mediation effect of selectivity and its statistical significance. Of these outcomes, we focus on aspirations as these are the only outcomes significantly associated with parental relative education (ref. Figure 3), although we also present results for other outcomes and full coefficient tables in Appendix Tables A10–A15.

**Figure 4.** Differences in aspirations by origin group



Notes: Weighted estimates from OLS models and 95% confidence intervals. Basic controls include gender, household composition, an indicator for being born in Italy, Italian region of residence, the size of the municipality and the school year attended. SES controls include an indicator of self-reported wealth, a count of items in the house, and an indicator of people per room in the house. Source: ITA2GEN survey, own calculations.

We find that controlling for parental relative education leads to a statistically significant (ref. Table 2) reduction in the gap in academic track aspirations between children of Latin American and Caribbean immigrants and the reference category, children of immigrants from EU+ countries. Parental relative education also explains the

(already small and statistically insignificant) gap in dropout expectations between children of Middle Eastern and Northern African descent, Sub-Saharan African descent, and those with parents born in EU+ countries. However, many groups are shown as being *more* disadvantaged in educational aspirations compared to the reference category (EU+) once parental relative education is controlled for in model 2. This is the case for children of Chinese and Southeast Asian and of South Asian parents relative to both academic track and dropout expectations, for children of Middle Eastern and Northern African and Sub-Saharan descent concerning academic track expectations only, and for children of Latin American and Caribbean parents concerning dropout expectations. The gaps in educational aspirations between children of Former Soviet Union and Balkan descent and those of EU+ descent are unaffected by parental relative education. These results mostly contradict our third hypothesis.

**Table 2.** KHB tests of differences in origin group coefficients between models 4 and 5

Origin group	Expect academic track			Expect dropout		
	Unmediated coefficient (Model 4)	Mediated coefficient (Model 5)	Difference	Unmediated coefficient (Model 4)	Mediated coefficient (Model 5)	Difference
FSU	0.04	0.047	-0.007	0.014	0.01	0.003
Balkans	-0.036	-0.045	0.009	-0.006	-0.002	-0.004
MENA	-0.035	-0.089	<b>0.054</b>	-0.018	0.005	<b>-0.023</b>
SSA	0.009	-0.062	<b>0.071</b>	-0.023	0.007	<b>-0.03</b>
LatAm + C	0.035	0.015	<b>0.02</b>	0.002	0.011	<b>-0.009</b>
China + SEA	-0.054	-0.082	<b>0.028</b>	0.101	0.113	<b>-0.012</b>
South Asia	-0.018	-0.069	<b>0.051</b>	0.036	0.057	<b>-0.021</b>

Notes: Weighted estimates KHB models. Differences marked in bold font are statistically significant at the 5% level. Unmediated coefficients come from Model 4 in Figure 4 and control for gender, household composition, an indicator for being born in Italy, Italian region of residence, the size of the municipality, the school year attended, parental absolute education, an indicator of self-reported wealth, a count of items in the house, and an indicator of people per room in the house. Mediated coefficients additionally control for parental relative educational attainment. Source: ITA2GEN survey, own calculations.

## DISCUSSION

In this article we drew on the growing literature on immigrant selectivity, hoping to shed light on the reason for Italy's and other southern European countries' exceptionality in the pattern of children of immigrants' educational outcomes. In contrast to Western and Nordic European countries, where children of immigrants tend to have higher aspirations than children without a migration background net of social class and achievement, studies on Southern European countries, and especially in Italy, have generally found children of immigrants to have similar or lower educational compared to native-origin students, and/or to note a lack of association between pre-migration social position and educational choices. Previous literature advanced the hypothesis that the higher aspirations and more ambitious choices of children of immigrants in Nordic and Western European countries are due to the often-unmeasured pre-migration social position of immigrant parents, which is only loosely reflected in their socioeconomic conditions after migration.

From this perspective, the absence of children of immigrants' "aspirations paradox" in Italy and similar immigration countries could be due to a less positive selection of immigrant parents or to a lack of association between this and their children's educational outcomes net of current material conditions. We hypothesized the former to be true (H1), and the latter to be false (H2). We structured our analysis around three questions. First, are immigrants in Italy positively selected? Second, does immigrants' selectivity (as a proxy of pre-migration social position) predict their children's educational outcomes? And third, if so, do compositional differences between origin groups in terms of absolute and relative education, as well as material conditions, explain differences in their children's educational outcomes?

Concerning the first question, we found a varied picture of educational selectivity among immigrant parents of school children in Italy, with some origin groups being highly positively selected despite having low absolute levels of education (i.e. parents from Sub-Saharan Africa and Middle East and Northern Africa), some having high levels of education but being negatively selected relative to the population in their country of origin (parents

from former Soviet Union countries), and yet others having low levels of education both in absolute terms and relative to their origin (parents from China and South-East Asia and from the Balkans). This contrasts with the findings of research on immigrants' selectivity in other European countries, which found most origin groups to be highly positively selected with regards to the educational distributions in their respective countries of origin (such as the UK (Luthra and Platt 2023) or Sweden (Engzell 2019)), and is in line with literature showing that Italy attracts immigrants *because* of its loose immigration control and large underground economy, and *despite* the scarce opportunities for immigrants in this country (Fullin and Reyneri 2011; Reyneri, 1998; Van Mol and de Valk 2016). Overall, we find that immigrants in Italy are on average *less positively selected* compared to other European immigration countries.

As for the second question, we found that parental relative education is significantly associated with educational *expectations*, but that grades and attitudes are better predicted by parents' absolute level of education. This is in line with Engzell's (2019) "aspiration squeeze" hypothesis, according to which parents with higher pre-migration social positions promote high aspirations for their children, but might not have the cultural and material resources to help them achieve similarly high grades (including for example through high parental involvement). The "aspiration squeeze" phenomenon in Italy might be further strengthened by the lack of policies aimed at supporting the integration of children of immigrants in school (Azzolini and Barone 2013), which is particularly damaging for the 1.5 generation who might have started their schooling in another country. Our second hypothesis is therefore supported overall: higher parental relative education is associated with higher educational expectations (higher expectations to go to the academic track of upper secondary education and lower expectations to drop out).

As for the third question, we find that despite its statistically significant association with educational expectations, relative education *does not* unequivocally contribute to explaining differences in any of the educational outcomes between origin groups: while it does reduce gaps in educational aspirations between some groups, it widens the gaps between others. This contradicts previous research (Engzell 2019), which found parental relative education to explain a large part of educational aspirations gaps between origin groups. This study was, however, based in Sweden, a country where almost all immigrant origin groups are strongly positively selected in education and where children of immigrants are consistently found to have ambitious educational aspirations compared to children without an immigrant background. In Italy, parental relative education is associated with better educational expectations at the individual level but does not drive group-level differences in this outcome, suggesting that other factors—such as discrimination, material conditions, or legal status insecurity (see e.g. Ferrara and Brunori 2024 on the association between Italian citizenship acquisition and upper secondary school track choices)—might more strongly determine these differences.

Our study is affected by a number of limitations. First, while ITA2GEN has the undeniable quality of being a very large-scale nationally representative survey on children of immigrants in Italian schools, with very rich information on these children's attitudes and expectations, it is nevertheless a survey conducted in schools, so all the information was provided by the children themselves. Given that children in our sample are mostly aged between 12 and 14, this leads to very high missingness in the parental education variable (and hence in the relative education one). Although our analyses show relatively weak patterns of missingness across key socio-demographic variables and our results were robust to imputation, we cannot exclude that there may be some non-random selection into missingness that we were not able to capture. More generally, children often misreport information on parental education and socio-economic status (Lavest et al. 2024), which may lead to bias and measurement error in indicators of socioeconomic conditions (for example, children's perceived family wealth). In addition, we do not have information on the occupation of the parents nor on their level of segregation at the residential and job levels, which are important candidates to explain the still largely unexplained differences across origin groups.

A second limitation is that we cannot directly measure nor attempt to explain the differences in educational outcomes between children of immigrants and children without an immigrant background. This is due to the characteristics of our main explanatory variable, parental relative education. A necessary condition to be able to use this variable in a regression together with absolute education is that it varies sufficiently within origin groups and absolute education categories, lest it incurs collinearity—see Ferrara and Luthra (2024) for a detailed discussion of the necessary criteria to use relative education in regression analyses. This condition cannot be met for children of Italian-born parents in our data as they mostly belong to the same age group (35 to 44 years old), so parental relative education and absolute education would be almost perfectly collinear for this group. However, the children of parents born in EU or other Western countries can be used as an alternative benchmark in our case. This group (largely composed of children with Romanian parents, one of the largest and most established immigrant groups in Italy) has a relatively neutral selectivity profile (mean and

median=53), similar average values of relative education by absolute education category as Italy, and similar educational outcomes as children without an immigrant background in Italy (cf. Ferrara and Brunori 2024).

A third limitation concerns the fact that our results are based on a sample of immigrant-origin lower secondary school children in the academic year 2014–2015, which is ten years prior to the time of writing. While the size and origin composition of the immigrant-origin population in Italian schools has remained relatively stable since then, especially compared to the sharp increase between the 1990s and the 2010s, changes in the stay duration of the parents of immigrant-origin school children and in the share of immigrant-origin children being born in Italy and having Italian citizenship might limit the extent to which our results reflect current-day conditions. However, the 2015 ITA2GEN survey represents, at the time of writing, the most recent large-scale and nationally representative survey of school children including the necessary information on educational outcomes and aspirations of immigrant-origin children in Italy. In future research, we aim to replicate the analyses using more recent data and extending the scope to university aspirations of upper secondary school children.

Theories of immigrant selectivity have become of central importance within the literature on migration and inequality. Thanks to the greater availability of international comparative data, there has been pioneering work in the measurement of immigrant selection and its consequences for second generations. However, much of this work has been focused on a restricted set of migrant destinations—mostly Western and highly developed countries. Mechanisms of selection and their ties to the success of the second generation may be more complex and nuanced in other settings. We hope that our work can stimulate further research into less researched contexts and migrant groups.

### Conflict of interest statement

The authors of this article declare that they have no financial, professional or personal conflicts of interest that could have inappropriately influenced this work.

### Authorship contribution statement

Alessandro Ferrara: Conceptualization, Formal analysis, Funding acquisition, Investigation, Methodology, Project administration, Writing – original draft, Writing – review & editing.

Claudia Brunori: Conceptualization, Formal analysis, Funding acquisition, Investigation, Methodology, Project administration, Writing – original draft, Writing – review & editing.

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