# Scuola Dottorale in Sociologia 

## Università di Trento

Indirizzo Sociologia e Ricerca Sociale XXIV ciclo

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Tesi: Contextual effects on the educational ambition of immigrants' children and natives in Italy and Belgium

## Acknowledgements

This dissertation would not have been possible without the advice and support of several important people. First and foremost, my sincere thanks go to my supervisors Prof. Francesco Billari and Prof. Helga de Valk for their guidance throughout this project. I am grateful to Francesco for his comments and suggestions and the ability to be present when his presence was needed. Many thanks to Helga for being always able to get straight to the point and for the chance she gave me to discover a new way of making research.

I thank my committee for the precious advice. I would like to acknowledge Prof. Marta Tienda who gave me the chance to present my thesis at Princeton University and to make one of my dreams come true. Thanks to Prof. Ross McMillan for his precious advice and his rare kindness. Also, I should not forget Prof. Paolo Barbieri for keeping on having trust in me, despite a first moment of difficulty.

I'm most grateful to Prof. Gianpiero Dalla Zuanna for believing in me and waiting so much for our first paper together.
My special thanks go also to Dr Nicola Barban for his support and for his ability in teaching me the art of waiting.
I also thank Prof. Marzio Barbagli for his calm and precious presence, during the first part of my PhD.
My sincere thanks also go to the group at Dondena Institute, which has been more than a simple research group, during the time spent in Milano. In particular I gratefully acknowledge dr. Bruno Arpino for his ability and patience to make me loving multilevel modeling. Thanks to Agnese for all the nice moments spent together. I would like to thank my colleagues in Trento, those at NIDI and my friend Giovanni in Milano.

Finally, great thanks go to my friends for the priceless support. Angela, Giulia, Alessandro, Giada, Sara, Andrea and Nevena have always encouraged me, even in the worst moments of this challenging and exciting Ph.D time. Thank you for being there when I needed you.
My sincere and special thanks go to Giuseppe.
I thank all my family for the way they love me and trust in me and my choices.

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## Introduction

When immigrants arrive in a host country they face new issues and confront a different social context. Simultaneously, migratory flows inevitably change the social structure of the host society, introducing new perspectives, behaviours, and beliefs.

The new wave of global immigration to Europe has numerous implications for governments, other institutions and society at large. The school system is certainly one of those institutions where changes due to the presence of newcomers are both unavoidable and necessary. School systems must tackle this new issue and ideally create a stimulating and open environment for new arrivals. The impact of immigration on processes of educational attainment is fundamental to understanding the drivers of social stratification. Moreover, on the flip side, the impact of the school environment on newcomers' outcomes is equally essential for understanding the integration process. Education is, in fact, the primary institutional context for the assimilation of children with an immigrant background. It is the place where first and second generation immigrants learn the language and social norms, it is where they establish educational credentials fundamental to social mobility, and it is where social networks (hypothetically) expand to create bridges between immigrants and non-immigrants that go beyond typical ethnic sub-groups. In this perspective, analyzing the school context is of primary importance for two reasons: Firstly, to have a better idea of the social implications of the presence of immigrants in the educational system and secondly, to understand the processes of assimilation for immigrants' children in European schools more clearly.

My thesis aims to discern which aspects of school context and of social interactions within the educational system need to be strengthened in order to create an environment where both immigrant and native students can perform at their best.

I define school context as the set of elements within the structure, culture, and environment of a school that can affect educational performance of students. These elements can be related to structural elements, mainly related to the school's resources or the academic organization (e.g. the presence of high qualified teachers), or to the social organization, given by the relationships among students (immigrants and natives) and the interaction between school and parents.

Furthermore, in this thesis, I aim to understand the mechanisms through which immigrants' children may influence the performance of natives, and to identify which resources and interactions are crucial for understanding the educational performances and ambitions of immigrants' children. This may provide insight into the assimilation or integration process of children of immigrants in the host society.

To reach these goals, I chose an indicator able to capture the mechanisms of assimilation and educational performance. More specifically, I decided to focus on educational expectations and aspirations. Looking at educational ambitions allows me to study educational performance, to narrow the gap between students of migrant backgrounds and natives, and to measure the social integration of immigrants' children. The focus on both educational expectations and aspirations as indicators of educational performance is very relevant. The literature confirms that they are good predictors of educational attainment, which in turn is a predictor of occupational and social status attainment. As Portes and colleagues state (2010), the relationship between expectations and achievement is "arguably one of the best established facts in social science. The rationale is obvious: if a young person aims at some lofty goal, she may not achieve it; but if she does not aim high in the first place, she will surely not get there. Stated in this form, ambition becomes a prerequisite - a necessary condition - for achievement" (p.793).

Educational expectations and aspirations are also interesting because they are good indicators of children's perceptions of the opportunities they have in the society in which they are living. In this sense, they can also be considered as a measure of how open a society is. Extremely elevated differentials in ambition between immigrants' and natives' children are a sign of great inequality of opportunity. If educational chances and ambitions depend on familial resources or individual ascribed characteristics (such as ethnic origin) and are not equally distributed, opportunities are clearly not equally distributed.

As mentioned, my thesis aims to investigate which aspects of school context should be improved in order to offer the greatest opportunities to children of both immigrants and natives in terms of performance. Improvement will be encouraged by proposing strategies able to enhance children's educational expectations and aspirations and to reduce differentials between the children of natives and immigrants.

Recent literature has become more precise in distinguishing between the concepts of expectations and aspirations. While aspirations are more the ideal type
of plan one would desire in a scenario of no further constrains, expectations are adjusted to the subjectively estimated probabilities of achieving a given outcome. In my thesis, I consider both these measures as broadly defining educational ambition, so as to capture both realistic expectations and ideal goals.

While the U.S. literature on expectations and aspirations (Kao and Tienda 1998, Wells 2008) clearly shows that children of immigrants have elevated educational ambitions, in large part higher than their nonimmigrant peers (Goyette and Xie 1999; Hao and Bonstead-Bruns 1998; Portes and Rumbaut, 2001; St. Hilaire, 2002), recent European literature demonstrates low levels of educational expectations and aspirations for second generation children when compared to natives (Portes et al. 2011).

## Structure of the thesis and research questions

The relevance of the topic and the absence of a rich literature on Europe make the aim of my thesis an exciting challenge. I engage with classic issues on the topic and propose new engaging queries. Using international data, I attempt to answer some relevant research questions: which aspects of individual background and school context directly shape educational expectations and aspirations? Are the children of immigrants living in Europe more ambitious than natives? Do we find lower levels of ambition for native children in schools with a greater presence of immigrant children? To what extent are the expectations and aspirations of the children of immigrants influenced by the educational expectations of their native schoolmates?

I will answer these questions in the empirical part of my thesis, composed of two chapters. The first chapter (Chapter 5) investigates the educational expectations and aspirations of native and immigrants' children living in two different European countries: Belgium and Italy. After delineating this international perspective, in the next chapter (Chapter 6) I deepen the analysis of the Italian case. More specifically, in the first part of the final empirical chapter, I investigate the educational expectations and aspirations of children of immigrants living in Italy and attending their final year of primary school (8th grade). In the final part of Chapter 6, I tackle the challenging issue of the impact of immigrants' children on the educational aspirations of natives. This dual approach is carried out through the use of two different data sources (PISA2009 for the first chapter, and ITAGEN for the second one). In further analyzing the Italian case, I am able to both verify results obtained in the first chapter and to deepen the empirical
exploration of several aspects concerning the effects of social context on the educational expectations and aspirations of children of immigrants and natives.

Chapter 5 was developed during a visiting period at the NIDI (Netherlands Interdisciplinary Demographic Institute). Part of this chapter has been selected for presentation at the European Population Conference in June 2012).

The chapter aims to define to what extent family resources, school context, and parental involvement in the school life of children interact and shape the educational expectations of immigrants and natives through an international comparison between two European countries: Belgium and Italy. I distinguish between two indicators of educational expectations: the expectation of continuing one's education after secondary school, and the expectation of reaching a tertiary level of education (as opposed to post-secondary professional courses). I use PISA2009 data concerning children aged 15. While existent European studies focus on single countries, my analysis proposes a comparison of two different European nations, where migration processes vary with respect to time and the main ethnic groups involved.

As mentioned, I explore the interaction between parents and school, and more specifically, the impact of parental involvement in school activities and decisions on the educational expectations of children of different origins. I also investigate the impact of school resources on the educational expectations of the children of immigrants and natives. To the best of my knowledge, there are no studies that focus on the link between parents' involvement or school resources and educational expectations.

In this chapter I also investigate the role of parents and the parental home in defining the educational expectations of immigrants and natives. The literature supports defining human capital as one of the most relevant determinants of educational attainment (Kao and Tienda 1998, Feliciano 2006). In taking into account the relevance of human capital, I add new elements to the analyses. I explore whether the presence of economic and cultural assets in the household determines educational expectations among children of immigrants and natives. In this way, I introduce several new aspects into my analyses in order to capture familial orientation to assure the maximum level of educational resources. I assume that living in an encouraging environment can stimulate children to develop academic ambitions.

Finally, I draw attention to variation in the educational expectations of the children of immigrants and natives by destination country. I expect that Belgium
and Italy, countries of long-standing and recent in-migration respectively, have developed different tools to deal with newcomers, which in turn resulting in different levels of expectations. These research hypotheses are answered in Chapter 5.

In the second part of the empirical analysis, I explore the specific case of Italy further.

In the nineties, Italy's demographic profile began to shift as it started to receive thousands of immigrants. During the new millennium, this situation has changed considerably. Thanks to a number of economic and territorial factors (above all geographical contiguity with central and eastern European countries) immigrants have become a large portion of the population. Legal and illegal migrants in 2011 made up more than $7.5 \%$ of the total population (ISTAT 2012). During recent years, the first generations of newcomers have started to have children and the profile of migrations has changed again, with an increase in family reunions. This has led to a rise in the presence of the children of immigrants in the Italian school system.

Even if the number of immigrant students in the school system has increased (in the 2008-2009 school year there were more than $7 \%$ of these students, an increase of $17 \%$ compared to the previous year, MIUR 2009), the Italian government has yet to introduce any specific new policies, either to care for the children of immigrants or to prepare Italian children to face such social change. Immigrant pupils entering the scholastic system "typically perform less well than natives at school for several reasons, including difficulties with the language of instruction, less educated parents, and problems of integration" (Brunello and Rocco 2013). It follows that teachers must dedicate more attention to these students. Where the number of immigrant students increases, we can easily observe changes in the daily organization of school-life. The Italian government has thus far not taken into account such change. The recent literature has endeavoured to address such transformations through analyses which focus primarily on changes in the educational performance of natives due to the rising proportion of immigrants in schools. My contribution to the literature in this regard is twofold. First, I focus on foreigners and whether and how much they benefit from interactions with Italians. Secondly, I concentrate on educational aspirations and expectations to offer some indication about the level of assimilation of immigrants' children and to propose some policy to enhance the educational ambitions of students.

The first part of the second empirical chapter of the thesis (Chapter 6) is drawn from a joint paper with Dr. Nicola Barban. It has been accepted as a working paper at the Dondena Centre for Research on Social Dynamics and published in the 2012 Special Issue of the Annals of the American Academy of Political and Social Science. Using ITAGEN data (an Italian survey on second generation immigrants carried out in 2005-2006), I explore the educational expectations and aspirations of the children of immigrants living in Italy and attending their final year of primary school (8th grade). In particular, I examine several challenging issues related to the association between educational ambition and relevant aspects including: structural characteristics (e.g. migration status and country of origin), social aspects (family socioeconomic status), social capital (friendship) and context (peers' expectations). I consider educational expectations as the intention to attend high school as opposed to vocational and technical courses. I measure aspirations based on whether or not the children desired to attend university.

I investigate the relevance of context in shaping educational expectations through a multilevel analysis which takes into account both individual and school level variables.

In comparing children's educational ambitions to actual reports from peers regarding their own academic attitudes and intentions, I endeavor to confirm the impact of peers on educational aspirations already observed in previous studies (Duncan et al. 1968; Hout and Morgan 1975). Since the literature has consistently demonstrated the relevance of peer and parental influence on the formation of youths' educational aspirations, I focus on schoolmates as representative of "significant others' influences." My hypothesis is that a child's attendance of a school in which most of the Italian students have high educational expectations (in this case measured as being more likely to attend high school), influences his or her educational expectations and aspirations. I also hypothesize that the educational expectations and aspirations of the children of immigrants are associated with the perceived relevance of friendship ties. Importantly, intergroup contacts, if based on close relationships, have the potential to reduce prejudice (Pettigrew 1998), which is key for achieving social acceptance and eventual integration. Therefore, I expect that valuing and forming friendships are key indicators of social acceptance that should be positively associated with educational expectations. Consequently, I hypothesize an association between these indicators and educational ambitions. More specifically, I consider both the
significance and form of friendship declared by students, and test their association with educational expectations and aspirations.

Thanks to the richness of the ITAGEN dataset, in this chapter I also have the opportunity to compare the educational expectations and aspirations of immigrants' children and those of natives, with a focus on different migration statuses among the first group. I explore whether, as shown in the U.S. literature, second generation and immigrant children who arrived at young ages have aspirations similar to those of Italians relative to children who arrived in Italy when they were over the age of ten. Moreover, I also test whether in Italy, as in the U.S. (Bohon, Johnson, and Gorman 2006; Louie 2006), children of immigrants have different ambitions depending on their country of origin.

In the final part of the second empirical chapter (Chapter 6), I focus on native Italian students.
Part of this chapter was selected for a poster presentation at the Population Association of America conference held in San Francisco in May of 2012.

One of the main questions that social scientists need to address concerns the growing number of immigrants present in schools and their impact on the educational performance of natives. This chapter thus aims to investigate the educational aspirations and expectations of Italian students attending their final year of primary school (8th grade) during the 2000s, the decade when Italy definitively changed from a country of emigration to a country of immigration. Through multilevel models, I test whether interethnic friendships and the proportion of immigrants in a school have an impact on the educational achievement of natives. This second chapter offers an opportunity to propose new policy perspectives with regard to the Italian case, as well as opening up an exciting debate over how to best manage the presence of newcomers in countries of new migration.

In this last empirical analysis, I also consider both secondary school track expectations and college aspirations as indicators of educational preferences in the short and long run. As in the previous part, I perform my analyses using data from the ITAGEN survey. I test whether a higher share of immigrant pupils in the school affects the educational ambitions of natives. This research question is based on recent literature on school compositional effects which suggests that factors such as "different culture, a different way of interacting with others and, most often, limited language proficiency" as well as "difficulties with the
language of instruction, less educated parents and problems of integration" (Rocco and Brunello 2013) influence educational achievement.

I also investigate which aspects of human capital play a determinant role in the educational ambition of natives. I expect that in the case of natives, as previously hypothesized for the children of immigrants, ambitions are associated with individual and family background, primarily the educational level of parents.

Given that my principal aim is to understand which aspects of the context are determinant in the formation of educational expectations, multilevel models represent a feasible approach for dealing with heterogeneity within schools. Multilevel modelling, in fact, allows relationships to be simultaneously assessed at several levels. Ignoring hierarchical structures and the fact that students are involved in schools with different characteristics could lead to a loss of relevant information, as well as distortions in parameter estimates and/or standard errors. The risk is to find relationships and differences where there are, in fact, no relationships and differences. To avoid distortion, I consider children as nested in schools. Working with educational performance, it is reasonable to assume that variability depends not only on individual (or first level) explanatory variables, but also on the fact that a certain individual belongs to a given group with characteristics that distinguish it from other groups. Hence, after controlling for individual level variables, I introduce school level variables able to define the context. This method allows me to better detect which individual or contextual aspects clearly shape the expectations and aspirations of pupils.

## An innovative contribution and a starting point for new strategies of inclusion

My thesis is based on the belief that if the aim of European society is to ensure the assimilation of immigrants and create an equal education system, narrowing the gap between the educational ambitions of immigrants' children and those of natives must become a priority. My aim is to identify which aspects of the school context need to be strengthened in order to reach this objective.

My thesis offers an innovative contribution to the sociology of education. Moreover, it provides relevant results for informing and changing policies regarding the integration of immigrants in the European context.

The use of PISA data for the international comparison is extremely innovative and allows for a deepening of several aspects of the educational context that have not yet been investigated in terms of educational ambitions (family resources in
the household and parental involvement in school activities). The ITAGEN data allow for an extensive exploration of the Italian case and provide interesting information relative to immigrants' children's country of origin.

Moreover, the overarching aim of my thesis is to contribute to current discussions on the integration of immigrants' children in European schools, with a focus on the Italian case. I also attempt to provide some useful guidelines for the development of policies concerning the assimilation of immigrants into European schools.

Supported by my empirical results, I propose several strategies centered on the relevance of school context. I aim to demonstrate that a challenging context is determinant both for children of immigrants and natives, and that the richness of the school context can (at least partially) contribute to alleviating the gap between the performance of immigrants' children and that of natives.

Results from this study (as I extensively discuss in the final section) can hence be used to improve European policies on the assimilation of immigrants' children, acting on scholastic context and the interactions between schools and families.

The thesis is organized as follows. First, I present (Chapter 1) a review of the recent literature on scholastic performance, assimilation, and educational ambition. I conclude the first chapter with the presentation of my research questions. The next chapter (Chapter 2) describes the datasets and methods used in the analyses. I then introduce (Chapter 3) the Italian and Belgian context of the study, presenting data on the educational systems of the two countries considered and the relative presence of immigrants in these countries and their schools. This is followed by a descriptive analysis of the educational expectations and aspirations in Belgium and Italy (Chapter 4). Lastly I present the two empirical chapters, each with the same structure: I set forth my hypotheses followed by results and conclusions. The first empirical chapter (Chapter 5) deals with the impact of school context on the educational expectations and aspirations of immigrants' children and those of natives in Europe. The second empirical chapter (Chapter 6) is composed of two parts. The first focuses on the children of immigrants attending Italian middle schools. The latter is devoted to an analysis of the impact of immigrants on the educational ambitions of Italian children.

The final chapter summarizes the main findings and discusses the policy implications of my empirical results.

## Chapter 1

Education and immigrants: a literature review

### 1.1. Introduction

The study of the educational outcomes of the children of immigrants is one of the most considerable themes of current international sociological literature. Educational outcomes represent an indicator of the success of the migration process. Most of the studies in western countries show evidence of an educational gap between natives and immigrants' children. Only now is the topic starting to be considered in Italy due to the increasing number of immigrant youths attending Italian schools and the new availability of data crucial to exploring the issue.

The theme can be addressed from different perspectives. Attention can be focussed on individual level aspects, contextual factors or cross national analysis. My thesis considers all of these perspectives, emphasizing in general a contextual approach. In this chapter I will first introduce the main approaches to the topic of an educational gap among immigrants' children and natives.

Among other educational outcomes, I choose to consider educational expectations and aspirations. I consider these two outcomes good predictors of both the integration of children into the host society and of future educational achievements for both natives and immigrants' children. In the second part of this chapter I will introduce the main studies on the theme of educational expectations and aspirations.

In the third part of the chapter I will introduce assimilation theory, which will be helpful to interpret the role of educational expectations and aspirations as indicators of integration in the host society.

Finally, in the last part of the chapter, I will present the hypotheses, drawn from the cited literature, that will be tested in my thesis.

### 1.2. Perspectives on the study of the educational outcomes of the children of immigrants

International literature agrees on the presence of an educational gap between natives and immigrants' children (Schnepf 2006; Marks 2005; Buchmann and Parrado 2006). Researchers identify a variety of explanations for why students with immigrant background generally underperform native students. Heath, Rothon and Kilpi (2008) propose a threefold theoretical partition that defines three different empirical approaches to the matter. The authors distinguish between the following approaches: the first one looks at socioeconomic factors, the second one to socio-cultural aspects, and the last one focuses on the characteristics of the school environment. I will present different perspectives and provide examples of the international and Italian literature on the topic. The indepth examination of Italian literature is due to the fact that the Italian case is the file rouge of my three empirical chapters.

Socioeconomic explanations associate the weaker performance of students with immigrant background with socioeconomic factors (Rumberger and Larson 1998). The human capital of immigrant families is usually lower than that of native families, and coming from such disadvantaged families results in lower performance. In most countries the parents of immigrant children tend to be less educated, work in lower status jobs, earn lower incomes and are less wealthy than other parents. Past and recent literature show how parents' education and occupational status as well as family income, size, and structure are good predictors of lower performance (Blau and Duncan, 1967; Duncan et al. 1972; Sewell and Hauser, 1975; Buchmann and Parrado 2006). According to this perspective, cultural factors are relatively unimportant. Once controlled for parents' socioeconomic characteristics, performance is unvaried. Moreover, immigrant students from higher socioeconomic backgrounds would perform just as well as non-immigrant students from similar backgrounds.

Socio-cultural explanations focus on cultural differences between the immigrant and host communities that may contribute to differences in educational outcomes (Rumberger and Larson 1998; Kao and Thompson 2003). Cultural factors include educational aspirations, community attitudes, parental and student beliefs about education and schoolwork, and student behaviours. This approach is mainly based on Bourdieu's theory of cultural capital (1974; 1977). According to
this theory, students whose values, norms, understandings and knowledge are similar to those of the dominant culture are more successful in the educational system. These common cultural understandings, in fact, strengthen the education system. On the contrary, immigrant students who are unskilled or less familiar with the dominant culture will perform badly. Although it has been verified that cultural factors are associated with student performance (DiMaggio 1982; Jonsson 1987; Sullivan 2001), there is little evidence that the cultural capital theory is useful in explaining the performance of immigrant students. Driessen (2001), for example, demonstrated that the cultural capital theory was unable to explain the performance of students with immigrant background in The Netherlands.

The last explanation is focused on the characteristics of schools. According to this perspective the lower levels of educational attainment among immigrants' children is not due to socioeconomic or socio-cultural factors but to their segregation into the less advanced parts of the education system. In most countries neither resources nor students with immigrant background are regularly distributed across schools. Immigrant families, particularly the first generation, tend to be concentrated in particular areas so there are high proportions of foreign students in the local schools. These schools may be performing poorly because they have difficulty attracting and retaining appropriate teachers, or parents have less time and resources to contribute to the school. Moreover teachers' efforts are not equally distributed among students because of the probable presence of immigrant students with reduced linguistic skills. The literature finds that schools and locations within schools are associated with the weaker performance of ethnic minorities (Willms and Chen 1989; Rumberger and Willms 1992; Portes and MacLeod 1996; Wang and Goldschmidt 1999; Cebolla-Boado and Medina 2011).

Following the Heath, Rothon and Kilpi (2008) scheme, this theoretical partition results in three different empirical approaches. The first one considers only individual level aspects; the second one, contextual level issues and the last one address the topic with cross national analysis.

Since the main aim of my thesis is to investigate contextual effects on educational ambition, I will first introduce the contextual approach. Afterwards, I will briefly present individual and cross national methods. The last two approaches are also relevant in the development of my thesis. In fact, I will also investigate the role of individuals' background in shaping educational ambition and furthermore, I will propose an international comparison.

However, school context is relevant to explain individual differences and differences between immigrants and natives in educational performance. Since (at least) the famous Coleman Report (1988), education scholars have continued to deal with the ways in which school context affects the academic performance of children, both directly and in interaction with individual predictors (Portes and Hao 2004). The analysis of school context focuses mainly on three aspects: the social interactions among children, the availability of school resources and the social composition of the school.

Some authors focus deeply on the first aspect, looking at the interaction among students, considered "peer effect". The main idea is that "predictions of the overall effect of schooling systems seem to depend on the social interaction between high- and low-ability students and resulting peer effect" (Entorf and Lauk 2008). The authors suggest that when students are involved in homogenous classes (in terms of educational performance) they will tend to improve the mean level of their performance. Conversely, heterogeneous classrooms might improve efficiency because less talented students would benefit from the social interaction with higher ability peers. This aspect is strictly connected with the "endogenous effect" theory proposed by Manski (1993). According to Manski the prevalence of any behavior in some reference group influences members of other groups. For instance, educational attainment may vary with the average level of achievement of the students in the same peer group (Cebolla-Boado 2007). Given its importance for individual student achievement, it is not surprising that there is a rapidly growing literature on peer effects and social interaction in schooling. Some authors focus their attention on the comparison between native and immigrants' children (Cebolla-Boado 2007, Entorf and Lauk 2008, Hoxby 2000). The presence of high level performing students should consequently enhance the mean level of their peers, and interactions among pupils are therefore useful in creating a more stimulating environment.

The second way to look at school context is to consider the availability of resources. Schools with a higher quality of resources are able to provide enhanced academic experiences that increase student engagement. The lack of crucial resources for instruction - sufficient number of textbooks, for example - hinders opportunities to learn in low resource schools (Baker et al. 2002). Researchers have focused their attention on the link between resource availability and student performance. The effects of quality school resources are clear where there is more variation in school resource availability (Fuller 1987). If schools differ greatly in their quality of resources, they will also differ on learning opportunities,
producing greater achievement inequality than resource-homogenous school systems.

The literature, however, does not agree on the link between resources and attainment. Hanushek (1986, 1997 Hanushek and Luque 2003) states that resources are not effective in improving educational outcomes. Recent research, focused on attainment and compare different educational settings in different countries (Chiu and Khoo 2005), concluded that students who enjoy more resources within a country, family and school often have higher scores.
In the thesis, I will look at the impact of school resources in the development of high educational expectations.

Research in the sociology of education has regularly shown that the composition of a school is associated with students' educational outcomes even after controlling for individuals' own socioeconomic origins. Studies have confirmed the importance of considering different aspects, such as ethnic concentration but also the minorities into which immigrants are grouped (local studies on this specific issue have been presented by Szulkin and Jonsson 2007 and Fekjær and Birkelund 2007). Portes and Hao (2004) studied contextual effects on the educational attainment of immigrants' children in the U.S. and the authors show that strong effects of national origin on grades are attenuated in schools with a high proportion of coethnics. The rich American literature about this topic has paid particular attention to the differential performance of students in Catholic and other private schools, as contrasted with those in public schools (Coleman 1988, Coleman et al. 1982). Educational researchers identify school composition as one of the key areas responsible for differences between schools in overall academic success and dropout rates (Rumberger and Thomas 2000). School compositional effects constitute the aggregate influence of school peers on a student's school experience, above and beyond the effects of the individual student's own particular peers (Alexander and Cook 1979; Gamoran 1992). A growing number of researchers analyze ethnical peer effects, looking at the role the presence of immigrants in the school plays in determining native performance (Hoxby 2000, Gould et al. 2009, Card and Rothstein 2007, Hanushek et al. 2009). On the contrary, recent studies show the influence of ethnic segregation on academic achievement independent of a school's socioeconomic status (Roscigno 1998). For the same reason, children from advantaged immigrant nationalities who attend schools with a large number of coethnics may see their academic success attenuated by the more competitive environment. This reduces the sense that they are, in some sense, "special" (Wolf 1997, Zhou 2004). I will doubly test this
evidence. First I will consider the role of ethnic groups in determining the educational expectations and aspirations of the immigrants' children. Second I will verify the impact of school segregation on the educational goals of native children.

Despite these efforts, this approach has not been completely clarified yet, and recent literature paves the way for the introduction of new aspects connected with the social context. For example, to the best of my knowledge, there have been no studies focusing directly on the link between school resources and educational ambition. Moreover, measuring the presence of friend relationships between immigrants and natives is another almost unexplored field. Determining whether the strength of social networks has an impact on education or if school resources may affect school attainment are two of the basic areas of research I address in my thesis.

The main element considered in an individual-based approach is social background. Usually researchers measure social background based on the parents' job and educational level, always taking into account the problem of comparability between educational opportunities in the host country and the originating one. Many authors observe that educational disadvantages remain even after controlling for social background (Van de Werfhorst and Van Tubergen 2007, Brinbaum and Cebolla-Boado 2007). Focusing rigorously on immigrants' children, some authors found minimal effects of social background on educational performance (e.g. Gang and Zimmermann 2000, Kristen and Granato 2007, Fekjær and Birkelund 2007). However, socioeconomic background appears to be the most powerful factor in explaining the gap between immigrants' children and native students, although its relevance differs significantly among specific receiving countries (Marks, 2005) and between national-origin groups (Fekjær and Birkelund 2007; Rothon, 2007; Levels, et al., 2008).

Some additional cognitive factors more specific to the children of immigrants are also considered in the individual approach. The first is the role of language. While it is clear that language difficulties are important for first generations (Esser 2006), it is still an open question whether language difficulties affect the educational outcome of second generations. However, language acquisition is commonly indicated as a crucial determinant of educational achievement (Schnepf, 2006; Esser, 2006). Fernandez and Nielsen (1986) demonstrated that children of Mexican origin involved in the United States school
system perform worse if they do not speak fluent English. Even if language acquisition is a determinant factor, the literature has shown that the effects of cultural capital are generally larger than those of language ability (Rosenthal et al. 1983; Glenn and de Jong, 1996). Moreover, this approach has been supported by studies, where the role of bilingualism in enriching communication is emphasized (Zhou and Bankston, 1998; Mouw and Xie, 1999). Hence, educational disadvantage might derive from problems of integration into the host country, which are certainly connected with the capacity to communicate in the language of the host country (Schnepf 2006).

Another approach commonly developed in the study of differentials in educational outcome between immigrants' children and natives is to follow Raymond Boudon's distinction between primary and secondary effects. Boudon (1974) includes in his theory a relevant reference to ambition. In this study it is explicitly said that the level of ambition required to reach a particular educational and social destination clearly depends on social origin. Starting from Keller and Zavalloni's (1962 and 1964) micro-sociological theories of educational inequality education, Boudon created his "social position theories". According to this theory, aspirations are conditioned by structural factors, such as social class origin. This allows a homogeneous definition of aspirations across classes. In this sense, Boudon's Inequality of Educational Opportunity-Inequality of Social Origin (IEO-ISO) model (1974) explains why higher levels of attainment may not reduce class differentials in education. In fact, it suggests the presence of a correlation between social background and individual aptitudes to succeed at school. In his theory, Boudon also argues that the characteristics of the educational system, rather than just individual social position determines the costs and benefits that hamper individual decisions (see Boudon's model in figure 1.1).

Figure 1.1. Inequality of Education Opportunity Model


Source: Boudon, 1974

According to Boudon's scheme, differentials in education across groups come from two source of inequalities, called primary and secondary effects. Primary sources of inequalities correspond to the influence of social background in school performances. They connect the socioeconomic position of individuals (derived by parents' socioeconomic position) and ability at school. Constraints derive from material disadvantages (eg. high vs low presence of educational resources), cultural deprivation (eg. scarce vs complete information about the educational system) and IQ differences. The primary effects of social background represent a compositional effect of genetic and environmental influences derived from family resources.

Secondary effects are the influences of social background on educational decisions even if performances are held constant. They correspond to how individuals evaluate the costs and benefits of going to higher education, including the financial and social costs and the expectation of educational success. Higher
status families tend to choose more difficult tracks for their children, since they do not want to risk social downgrading or at least want to maintain the socioeconomic status they have attained themselves (Boudon, 1974; Breen \& Goldthorpe, 1997).

If preferences for education are equal across classes, differences in cost and benefit structures produce different incentives to continue studying, so ambition and determination are also a source of differentiation. In empirical models the primary effects are defined by the effect of school grades or performance tests on transitions to higher education. The secondary effects are then defined as the remaining effect of social background after controlling for socioeconomic differences in performance.

In my analyses I will consider some relevant aspects concerning integration and individual characteristics (mainly gender, socioeconomic status and cultural capital of parents). The aims of my thesis and data restrictions do not allow me to use information about language acknowledgement.

Cross national differences have been explored by considering different aspects characterizing each nation which are believed to be relevant in determining the school careers of immigrants' children. Firstly, countries have different degrees and policies of selectivity for first generations. This may have an impact not only in first but also in immigrants' children's educational life. There is in fact a variation in the receptivity toward immigrants which can be observed by examining the policy discourse and organization structures that deal with the incorporation of foreigners into society (Soysal, 1994; Freeman, 1995). European countries also vary in their degree of racist attitudes, anti-discrimination legislation and other factors which might influence ethnic educational penalties. There are some aspects of the labor market which clearly distinguish different areas. Host countries differ in their selection and tracking within the educational system (Crul and Vermeulen 2003), the nature and strength of school-to-work linkages, the degree of employment protection legislation, the extent of insider/outsider boundaries in the labor market, and general labor market flexibility (Kogan 2006). The last characteristics to consider for a cross-national approach deal with the economic condition within each country.

Self-selection of immigrants determines their characteristics and motivations. It has not been confirmed yet in cross national analysis that the process of selection of immigrants impacts upon their educational results, while it
has been confirmed that the lower the socioeconomic background of the immigrant is, compared to natives in the country, the bigger their educational disadvantage (Schnepf 2006). In Chapter 6 I will deal with the problem of selection and its impact on the educational outcome of natives.

Recent literature on the educational performance of immigrants' children has followed these approaches. Since the Italian case is the file rouge of my thesis, I will briefly introduce recent literature specific to the theme of differentials in performance between Italians and immigrants' children (for a complete review see Azzolini 2011). During the past few years, Italian scholars have started to look at immigrants' children's performance as the central topic both for Italian sociologists of education and for other scholars (e.g. economists) interested on school attainment and school choice. Checchi and Flabbi (2006) assess the effect of family structure and socioeconomic status which influence not only the outcome but also the intention of educational attainment existent within families. They find a persistent gap between native and immigrants' children concerning the fact that immigrant families' children choose shorter educational paths that will likely exclude attending college. The authors demonstrate that this is clearly linked to family structure and socioeconomic status.

Mocetti (2007) reflects on the fact that school choice between the first and second cycle in Italy is determinant to define future work and academic prospects. His study, based on panel data from RCFL (Rilevazione Continua sulle Forze Lavoro, Continuous Survey on Labour forces), focuses on the impact of family background and social context on secondary school selection. He considers aspects such as family characteristics, local demographic and social indicators, and the specific aspects that each particular local school offers (mean age of teachers, number of teachers, etc.). Mocetti states that social background has a strong impact on school choice because families with low social position still encourage children to invest less time on education. Decisions and aspirations are confirmed to be connected with the economic resources of the family and family strategy. This has been established by testing the impact of the number of children per family on educational choices.

A report, edited by Paolo Canino for the Cariplo Foundation, has recently been presented, dealing with school attainment and school choice among immigrants' children in Italy (2010). It highlights a strong discrepancy between Italian and immigrant students, especially in the choice of school after junior high. Pupils with immigrant background are more affected by drop out and tend to
prefer schools with an immediate work progression. By studying social background and school attainment, they confirm that school choice is influenced by being immigrants. Data come from Invalsi, Rilevazione sulle Forze di Lavoro (ISTAT) and Anagrafe degli Alunni Italiani (Ministry of Public Education).

Mantovani (2008), in her local study of the province of Bologna, analyzes the connection between social origins and school grades for children with a migratory background. Results confirm a tendency revealed in other European studies: parental occupation has a stronger correlation with grades for natives than for immigrants. This study also shows that ethnic differences are larger among children with less educated parents and tend to decrease with the increase of a family's cultural level. This leads the author to underline the existence of cumulative disadvantages.

An increasing number of analyses have been developed using ITAGEN data (for further details on these data see Chapter 2). The studies of immigrants' children have mainly focused on school attainment and social origin using individual perspectives (Casacchia et al. 2009, Casacchia et al. 2008; Dalla Zuanna et al. 2009; Barban and White 2011). Underlying the still existing gap between natives and immigrants, authors mainly focus on different patterns at regional level, agreeing on the impact of social background on school attainment. Barban and White (2011) first approach, in a more specific way, the theme of transition from primary to secondary school using ITAGEN. They aim to test whether the disadvantage of being an immigrant remains after controlling for family characteristics and whether generational status plays a role in the choice of secondary school, controlling for outcome at the end of middle school. The analysis confirms that, with the exception of recent immigrants, the lower academic outcomes of immigrants are explained by socioeconomic status as well as background characteristics of the family. Moreover, the result of the final exams taken in junior high school cannot fully explain the choice of secondary education; also after including the middle school result, there is still a significant effect from socioeconomic variables and generational status.

Despite the growing number of sociology scholars approaching the theme, the floor is still open to new challenging research questions. As mentioned, in fact, nothing has been done to define the impact of the presence of children with immigration background on native performance and nobody has focused any attention on educational ambition.

### 1.2.1. Educational expectations and aspirations

Previous theories and empirical approaches have also been applied in the study of educational expectations and aspirations. First of all it is useful to define some basic concepts regarding educational aspirations and expectations.

The recent literature has become more and more precise in distinguishing the concepts of expectations and aspirations. The measurement of aspirations and expectations is based on students' plans for the future, which are the result of various forms of input, including both concrete and abstract attitudes about education.

On one hand, educational expectations are more realistic in capturing concrete plans for the future (Feliciano 2006), and correspond to "the educational and occupational levels that children [of immigrants] realistically expect to achieve" (Portes et al. 2010, p. 779). On the other hand, educational aspirations "capture general goals or ambitions for the future" (Feliciano 2006) and correspond to "the level of education that respondents would ideally like to achieve" (Portes et al. 2010, p. 779). To sum up, while "expectations refer to what individuals think will happen, aspirations refer to what they hope will happen" (Jacob and Wilder 2010).

I refer to "educational ambition" as a concept including both expectations and aspirations.

Educational ambitions predict future educational attainment, denote selfperceptions and influence attitudes toward school and, if not fulfilled, they can represent a factor of frustration and social isolation (Krahn and Taylor 2005). In particular, I refer to Portes and colleagues' considerations of the "strong relationship between aspirations and achievement", which they consider to be "one of the best established facts in social sciences" (Portes et al. 2010 p.793). They state that having high goals is essential to reach high goals. Even if you have high aspirations, you cannot be sure of realizing them, but, if you don't have high aspirations, you cannot have high results. In this sense, educational ambition is a necessary condition for educational achievement.

According to the previous literature, a range of factors appear to shape educational aspirations. I briefly summarized the main studies on the educational
expectations and aspirations of immigrant children and classical approaches to the topic. Specific literature connected to my research questions will be presented in the final part of the chapter where, I introduce the research hypotheses. As I will demonstrate in Chapter 4, most parts of the evidences from the previous literature are confirmed once I present an overview of the educational expectations of immigrants' children and natives in Italy and Belgium.

In recent years, a growing body of literature has documented gender differences in educational expectations. Recent literature demonstrates that girls have superior educational aspirations than boys and consequently, are more capable of reaching better attainment (Fernández-Kelly and Konczal 2005; Feliciano and Rumbaut 2005, Portes et al. 2010).

The human capital of parents, measured through their level of education, plays a crucial role in shaping immigrants' children's aspirations (Kao and Tienda 1998; Feliciano 2006). Other factors that influence educational ambitions include parents' involvement in schools, family structure, student academic performance in early grades, student self-perceptions, and attitudes toward school (Lowe et al. 1997; Perron 1997; Kao and Tienda 1998; Trusty 1998; Garg et al. 2002; Dinovitzer et al. 2003). My research will emphasize the role of gender, parental socioeconomic status and educational level.

Focusing on the educational aspirations of immigrants and ethnic groups, authors tend to concentrate on ethnic identity first, then on age at immigration as influential factors (Perron 1997; Dinovitzer et al. 2003; Krahn and Taylor 2005). The children of immigrants born in the host country have significantly higher expectations than those children born abroad (Portes and Rumbaut 2001, St. Hilaire 2002).

Ethnic identity has been recognized as a major factor affecting educational aspirations. Studies in the U.S. confirm that the children of immigrants have different ambitions depending on their country of origin (Bohon, Johnson, and Gorman 2006; Louie 2006).

Given the recent nature of immigration to Italy, there are few studies on which to draw. But the international literature (especially that for the United States) shows clear gaps in educational ambitions by nativity and birthplace (Kao and Tienda 1998; Portes et al. 2010), as well as by generational status (Portes and Rumbaut 2001), length of residence in the host country (St. Hilaire 2002), and age at arrival (Beck et al., 2012). Building on stylized findings from studies based in other countries with longer immigration traditions, I examine nativity and
birthplace variation in the educational expectations of immigrants' children in Italy.

This brief summary of factors shaping educational aspirations and expectations will be enhanced when my research hypotheses are presented. In my analysis I will include both these classical aspects and a new approach that takes contextual elements into account.

### 1.2.2. Assimilation theory

In my thesis I analyze which aspects of the school context have an impact on expectations and aspirations of the first and second generations of immigrants (and natives) to provide strategies for increasing educational ambitions. By analyzing the gap between children of immigrants and natives, I get a good indication of the level of integration of first and second generations within the host society. For the analysis of this aspect, concerning the integration of immigrants' children, I refer to the theory of assimilation, attempting to identify a significant pattern in the analyzed national contexts. Portes et al. (2009) define educational expectations as "early adaptation outcomes" that play a "strong inhibiting role on downward assimilation" (p. 1101), reinforcing the role of socioeconomic status and structure of the family.

Classical assimilation theories (and their application to real cases) show the prevalence of "upward mobility", where the children of immigrants are supposed to reach a higher social and economic status than their parents (Park and Burgess 1969; Gordon 1964). Alba and Nee (1997, p.863) define assimilation as the "decline, and at its endpoint the disappearance, of an ethnic/racial distinction and the cultural and social differences that express it". The old, traditional pattern of individual assimilation into the majority middle class still exists. This 'classical pattern of assimilation' is said nowadays to only be open for those immigrants who arrive with more than average human capital and who are, partly as a result of that, received positively by the government and the general population. Their children tend to be successful and move easily into the middle class.

This was due to their tendency to become culturally and linguistically more similar to the American middle class than to their family of origin (Rumbaut

1997; Zhou 1997). In 1997 Rumbaut suggested that "upward mobility" might not be the only possible way of assimilation, especially for new U.S. immigrants.

In 1992, Gans had already proposed the dualism between upward and downward assimilation as possible patterns for new second generations arriving in the U.S. One year later, Portes and Zhou (1993) present their theory of "segmented assimilation" for the first time. This theory is based on the fact that, being a multi stratus and unequal society, the U.S. can guarantee multiple patterns of assimilations. The authors theorize three possible patterns: The first is classical, where immigrants assimilate to the U.S. middle class; the second predicts downward mobility, with assimilation into the urban underclass; the last one foresees "selective acculturation" (Portes and Rumbaut 2001, p.54) where immigrants preserve their own culture and values accompanied by economic integration (Rumbaut 1997; Portes and Zhou 1993; Zhou 1997).

Adopting the majority culture is no longer recognized as a precondition for upward social mobility

Firstly, "there are circumstances at present in which assimilation does not lead to economic progress and social acceptance, but to precisely the opposite results" (Portes 1995, p. 249). When some groups, Mexicans and Haitians, for example, come in contact with the black ghetto population, they develop an adversarial or oppositional culture. This will result in downward assimilation or assimilation into the underclass, a situation of 'permanent poverty' (Portes and Zhou 1993, p. 82).

Secondly, "Immigrant youth who remain firmly ensconced in their respective ethnic communities may, by virtue of this fact, have a greater chance of educational and economic mobility through access to the resources that their community makes available" (Portes 1995, p. 251; see e.g. also Zhou 1997). This variant is characterised by a high degree of linear ethnicity, which Portes (1995, p. 256) describes as "a continuation of cultural practices learned in the homeland." Preservation of one's own group and culture serves primarily as a buffer against downward assimilation. This pattern is said to manifest itself in groups such as Cubans, Punjabi Sikhs and Vietnamese.

To determine educational expectations and aspirations as an indicator for different patterns of assimilation, there are two factors which have to be considered: the major exogenous factors and the principal barriers that children of immigrants have to face in the host society.

Exogenous factors are "the principal resources (or lack thereof) that immigrant families bring to the confrontation with the external challenges facing their children" (2009, p. 1079). These factors include the human capital of immigrant parents, the social context of the host country, and family composition. Human capital is measured by the formal education and occupation levels of the parents, while family composition is relevant because extended families (composed of grandparents and siblings) act in motivating and controlling children. Social context defines the modes of incorporation (Haller and Landolt 2005; Portes and Rumbaut 2001): differences due to the receptivity of government authorities, the native population and the social networks within the present coethnic community.

The second factor explores the barriers that children of immigrants have to face in their host society. These barriers are mainly racism, the dual labour market and the deviant lifestyle of gangs. Racism is something that scholars must take into account, especially considering American society, which is extremely hierarchical and where immigrants' children are mainly non-white. The bifurcation of the labour market and the growth of a society based on the tertiary sector divides workers into those that are highly skilled, with high incomes, fringe benefits, job security, and good prospects for upward mobility; and the low skilled, typified by low incomes, little job security, and minimal training. To reach this second kind of job, and to raise their parents' status, the children of immigrants must obtain a university degree. An inter-generational lack of mobility and second-generation stagnation into working-class occupations is extremely dangerous if children are exposed to the risk of being engaged in deviant activities and organised gangs.

The interaction among exogenous factors influencing second-generation adaptation and the barriers posed by racism, bifurcated labour markets, youth gangs and the drug trade translate into different patterns of assimilation.

Figure 1.2. The process of segmented assimilation: a model


Source: Portes et al. (2009) pp. 1082

The three variants of assimilation are fostered by three corresponding forms of acculturation: dissonant, selective, and consonant (e.g. Portes and Rumbaut 2001, p. 54).

In the case of dissonant acculturation we see that parents cannot keep up with the acculturation of their children because the children lack strong family support. They tend to lose control because children incorporate the language and values of the host society, refusing their parents' values.

In pluralistic integration and in the presence of strong co-ethnic communities, parents remain in control. There is less parent-child conflict, the process of acculturation is retarded and parts of the parental culture and language are maintained while the new culture is learned (Vermeulen 2010). In this case children benefit from their bilingualism (Portes and Hao 2004).

In the case of 'classical assimilation', parents can support their children in the process of acculturation since they go through it together, learning the new values and the new language.

According to some scholars, downward assimilation cannot possibly exist in Europe since there is no native black underclass in European inner cities and the presence of such an underclass is basic to the process of downward assimilation of the 'new' immigrants in the United States (Vermeulen 2010).

The theory of assimilation has been proposed for American society, but several scholars have tried to apply it to European society.

Studying Dutch society, Margaret Gibson (1997) is the first to argue that Turks and Moroccans represented cases of downward assimilation. Other scholars tend to be more conservative, since the number of second generations already
positioned in the labour market in the Netherlands is still low (e.g. Roelandt 1994, p. 219; Vermeulen 1998, p. 104-107). However, the use of recent survey data on the second generation in Europe (TIES, The Integration of the European Second generation project) allows scholars to detect a strong polarization in the second generations of Turks and Moroccans, where a quarter of them outperform their parents while another quarter of them is at risk of stagnation (Waldinger and Perlmann 1998 in Vermeulen 2010). At the same time, Antilleans are seen as a model of downward assimilation since newcomers are at a high risk for unemployment, one-parent families, criminality and violence.

Silberman, Alba and Fournier (2007) explore the case of Maghrebins in France, demonstrating that despite the possibility of revealing mechanisms of segmented assimilations, they can be described as merely at risk of facing downward assimilation. They perceive that they are discriminated against, perform less well than natives in education outcomes, and families are concentrated in the poorest neighbourhoods.

Defining expectations as early outcomes of assimilation allows me to give insight into support mechanisms for future upward or segmented assimilation. It may furthermore provide suggestions for policies to avoid negative downward assimilation. the first signals of downward assimilation.

### 1.3. Research questions and hypotheses

In this second part of the chapter, I will present the research questions and related hypotheses that will be answered by the thesis.

### 1.3.1 The role of parental involvement, school resources and family environment on educational expectations of natives and immigrants' children in Belgium and Italy. Research hypotheses

Schools with a higher quality of resources are able to provide enhanced academic experiences that increase student engagement. In low resource schools, the lack of crucial resources for instruction - an insufficient number of
textbooks, for example - hinders opportunities to learn (Baker et al., 2002). Researchers have focused their attention on the link between resource availability and student performance. The effect that the quality of school resources has on student performance is clear in schools in which there is more variation in resource availability (Fuller 1987). If schools differ greatly in the quality of their resources, they will also differ in the opportunities they offer students to learn, producing greater achievement inequality than resource-homogenous school systems.

The literature, nevertheless, does not agree on the link between resources and attainment. Hanushek (1986, 1997; Hanushek and Luque 2003) states that resources are not effective in improving educational outcomes. Recent studies focusing on attainment and comparing different educational settings in different countries (Chiu and Khoo 2005), conclude that students who attend schools with more resources as well as come with families with more resources have higher test scores. I will which one of these theories fits best in Italy and Belgium.

Chapter 5, HP1. My hypothesis is that the availability of resources in the school is connected with the individual expectations of the children. Consequently, the more assets offered to the students, the higher their expectations will be. Students attending schools with more resources (as measured by proportion of high qualified teachers, higher teacher-student ratio and higher quality of educational resources) are more likely to have higher educational expectations.

Nevertheless, the few studies on the impact of school resources have primary focused on the majority group students. Only a few small scale studies (see e.g., Schwartz and Stiefel 2004) look at the impact of resources on the educational performance of immigrants. Most of them focus on variations between the share of school-level expenditures and the presence of immigrants in the school.

Chapter 5, HP2: My scope in the chapter is different: I would like to examine the extent to which school resources explain the differences between natives and children of immigrants in terms of educational expectations. I expect that the resources of the school can partially contribute to covering the gap in educational expectations between students who are part of the majority population and minority students.

Past studies show that greater parental involvement promotes "positive attitudes toward school, improves homework habits, reduces absenteeism and dropping out, and enhances academic achievement" (Sui-Chu and Willms 1996,
126). Parental involvement is a multidimensional construct and takes many forms, including high aspirations relating to personal fulfilment, contact with schools to share information; participation in school events; participation in the work of the school; and participation in school governance (Desforges and Abouchaar 2003, 4).

Parental aspirations are found to have a powerful influence on achievement among students in the U.S. both directly and indirectly, through discussion (Singh et al. 1995). Garg et al. (2002) confirm that students' perception of their parents' educational aspirations shapes educational aspirations. High levels of parental expectation, consistent encouragement, and actions to enhance learning opportunities in the home were all found to be positively associated with high aspirations and college enrolments in students, regardless of students' SES or ethnic background (Sacker et al. 2002).

Moreover, researchers confirm a positive relationship between schoolinitiated practices to inform, empower, and involve parents and children's educational outcomes (e.g., Epstein 1996, Epstein and Lee 1995; HooverDempsey et al. 1987).

Although parental involvement, especially in the form of parental values and aspirations modelled in the home, is a major force shaping pupils' achievement and adjustment, it may act differently among ethnic groups (Coleman 1987). Apart from norms for success, parents from some ethnic groups may not feel comfortable communicating with teachers or participating in school activities because of language barriers or differences in cultural values (see Delgado-Gaitan, 1991). Earlier studies also indicated that parents' involvement differs by origin either in terms of their awareness of the working of school and wider educational system (Fuligni 1997) and/or because of language obstacles (Suàrez-Orozco 1989).

Chapter 5, HP3: Following the existing literature, my hypothesis is that parental involvement in students' education in the school (measured as the direct influence of parents in decision-making about budgeting, instructional content, and assessment practices, and the level of parents' expectations of the school) enhances the educational expectations of their children (HP3a). Moreover, I expect that parental involvement, as an indicator of inclusion in the host society, will reduce differences between natives' children and immigrants' children (HP3b).

Besides studying the role of context in shaping educational expectations, I also focus my attention on the role of parents and social origin. Earlier studies have clearly shown that part of the difference between educational aspirations and expectations are related to both parental characteristics and the resources available in the parental home. It has been demonstrated in the literature that parental human capital, mainly the educational level of the parents, plays a crucial role in determining educational expectations. This is not only true for majority group (native students) but also for the children of immigrants where, for example, the level of parental educational in the country of origin is an important determinant for the educational expectations of their children raised in the new settlement country (Kao and Tienda 1998, Inoue 1999, Feliciano 2006, Portes et al. 2011). Parents with higher levels of education are more likely to have "the educational experience and resources to draw upon when helping their children achieve a college or graduate level of education" (Spera et al. 2009, 1141). Moreover, students with more resources (e.g., books, teacher attention, and family income) typically have more learning opportunities and capitalize on them to perform better academically (e.g., Baker et al. 2002). Furthermore, scarce resources may "limit parents' ability to help their children achieve the educational aspirations they set for them" (Spera et al. 2009, 1141).

Chapter 5, HP4: Based on this literature, I expect that children whose parents have higher human capital, better socioeconomic status, and more resources to help them (reflected in home possession of cultural and economic assets), have higher educational expectations than those whose parents have less resources in these different domains. I expect this hypothesis holds among all origin groups.

Studies from the United States, however also indicate that there are potential differences in educational expectations and aspirations which clearly show that the children of immigrants have elevated educational expectations than children of different origins. It is concluded that the children of immigrants have elevated expectations compared to their non immigrant peers (Goyette and Xie, 1999; Hao and Bonstead-Bruns, 1998; Portes and Rumbaut, 2001; St. Hilaire, 2002). The educational aspirations and expectations of European natives and immigrants' children are still largely unexplored. Recent studies report low levels of educational ambition among first and second generation children (Portes et al. 2010). A recent Belgian study demonstrate that while second generations have the same expectations as natives, this is not the case for first generations, who reveal
lower level of educational expectations than native peers (Van Houtte and Stevens 2010) .

First generation immigrants face challenges due to the "social and cultural dislocations inherent in the process of migration and the challenge of language acquisition" (Suàrez-Orozco et al. 2009, 714) that can bring about lower educational performance and lower expectations, as previous studies have found.

Chapter 5, HP5: In line with this earlier work, I expect that for my study, due to the immigration experience and the adaptation process in the new society, the educational expectations of the children of immigrants will be lower overall compared to the expectations of natives (HP5a). In line with recent European literature, I furthermore expect that children from the first generation of immigrants are less ambitious than their second generation peers (HP5b).
1.3.2 The role of school context on the educational expectations and aspirations of immigrants' children and natives in Italy: Research hypotheses

St. Hilaire (2002), studying second generation Mexicans in the U.S., identified length of residence in the host country as having a significant and positive effect on aspirations. Portes and Rumbaut (2001) also reported that second generation children had higher expectations than children born abroad. Neidert and Farley (1995) stated that educational aspirations follow an assimilation perspective, and the differences between natives and second generation immigrants attenuate monotonically with time across generations. International literature, mainly based on U.S. data, highlights the differences in terms of aspirations between children of immigrants and natives (Kao and Tienda 1998; Portes et al. 2010). Prior studies also show extensive ethnic variation in educational attitudes. Among Hispanic students in the United States, for example, Cubans immigrants have significantly higher university aspirations compared to immigrants of Mexican and Puerto Rican origin (Bohon, Johnson, and Gorman 2006). Louie (2006) assessed differences in outlook toward the future between Dominican and Chinese university students in the United States. A key insight is that educational expectations depend on reference group. The Dominicans compare themselves to their peers in the Dominican Republic and in the United States, while the Chinese compare themselves to their highly successful U.S. compatriots. Although Dominicans average lower in terms of educational
achievement than Chinese students do, they are more optimistic about their educational future than their Chinese counterparts.

Because immigrants' children have become the focus of international literature on educational expectations, ethnic differences are a focus of interest. In the Italian context different countries of origin reflect variation in cultural capital, command of Italian and the usage of source-country language at home, and different approaches toward school vis-à-vis the host country.

Chapter 6.1, HP1: I hypothesize that in Italy, as shown for the United States (Portes and Rumbaut 2001; Bohon, Johnson, and Gorman 2006; Louie 2006), the educational expectations and aspirations of children of immigrants will differ according to their country of origin.

Schools are supposed to promote social integration among children of different backgrounds, guaranteeing a diverse environment that reduces social distances between individuals (Heyneman 2003). Importantly, intergroup contacts, if based on close relationships, have the potential to reduce prejudice (Pettigrew 1998), which is key for achieving social acceptance and eventual integration. Previous research shows that, since education is one of the leading factors in the creation and development of personal relationships, when people can select their interaction partners, they tend to avoid educational differences (Kalmijn, 2005). In fact, people build up their social circle by choosing acquaintances, friends, and partners who are similar to them. This is the principle of homophily or preference for interaction with similar others (McPherson et al., 2001). It's clear that, once moving to a foreign country, the presence of many natives around, lead to the opportunity to meet them and immigrants' children are structurally conditioned to interact with natives. Moreover meeting natives can lead to fluency in the language of the native population, or in the opposite direction, immigrants who master the language can engaged in contact with natives more easily. In 1954, Allport developed an intergroup contact theory that was subsequently developed by Pettigrew (1998). This theory states that 'constructive' intergroup contact reduces negative intergroup attitudes. Moody (2001), reporting intergroup contact theory refers that intergroup contact can alleviate the effect of cultural distance and that when there are more contacts, society becomes more experienced with immigration and the integration of immigrants. Hence it is plausible that there is an effect of familiarization over and above individual contact with immigrants that can be a sign of a more positive environment.

Chapter 6.1, HP2: Therefore, I expect that valuing friendships and meeting friends are key indicators of social acceptance that should be positively associated with educational expectations. More specifically, I examine how students' reported friendship ties are associated with both their short-term educational expectations and long-term aspirations.

Finally, several authors have established that students’ peers influence their educational ambitions (Duncan et al. 1968; Hout and Morgan 1975). To examine how school context shapes educational attitudes, I use classmates' nativity as indicators of "significant others' influences."

Previous studies, mainly in the United States, have found that peers, parents, and teachers help to not only shape educational goals (Buchmann and Dalton 2002) but also to mediate the effects of other relevant aspects such as socioeconomic background and ability (Haller and Butterworth 1960; Duncan, et al. 1968; Sewell and Shah 1967; Sewell et al. 1969). On one hand, there are school compositional effects related to the presence and the characteristics of schoolmates. They act regardless of the presence of individual social relationships among peers: "School compositional effects constitute the aggregate influence of school peers on a student's school experience, above and beyond the effects of the individual student's own particular peers" (Portes and Hao 2004, 11920). On the other hand, students benefit from interactions with their peers. Students with lower abilities tend to perform better when they share classes with peers who have higher levels of ability, thanks to social interactions between the two groups. The main idea is that "predictions of the overall effect of schooling systems seem to depend on the social interaction between high- and low-ability students and resulting peers effect" (Entorf and Lauk 2008, 634).

This second aspect is strictly connected with the idea of the "endogenous effect" that Manski (1993) proposed to describe the influence of a behavior in some reference group on members of other groups. For instance, "educational attainment may vary with the average level of achievement of the students in the same peer group" (Cebolla-Boado 2007, 343). Recent literature focuses attention on the concentration of immigrants in schools. The number of immigrant students present in schools is supposed to have an impact on the educational performances of natives for two reasons: learning opportunities due to school characteristics and peers effects (Cebolla-Boado and Medina 2011).

Educational performances and expectations may be influenced by microinteractions among peers. "Peers affect academic motivation, engagement and achievement through information exchange, modeling and reinforcement of peer
norms and values" (Ryan 2000, in Fekjær and Birkelund 2007, 312). This idea is based on the assumption that immigrants' children are less inclined to have high aspirations, and have more negative attitudes and lower performance than natives. Interactions between natives and immigrants represent "disincentives to investments in education" (Cebolla-Boado and Medina 2011). (Cebolla-Boado and Medina 2011, 610) The existence of a negative correlation between the concentration of immigrants and the school attainment of students is a welldocumented empirical conclusion in American and European sociology of education (Felouzis 2003; Portes and Hao 2004; Fekjær and Birkelund 2007; Szulkin and Jonsson 2007; Cebolla-Boado and Medina 2011). Rather than focusing on the effect of immigrants on natives, I analyze whether the presence of native students with high educational expectations is associated with children of immigrants' educational motivation.

Chapter 6.1, HP3. Specifically, I hypothesize that attending a school where most of the Italian students expect to attend high school is positively associated with the educational expectations and aspirations of children with immigrant parents.

In the second part of this chapter, devoted to the Italian case, I focus my attention on the role of school context in defining the educational expectations of natives.

School is the primary institutional context for assimilating immigrants. It is where the first and second generations learn language and norms; it is where they establish educational credentials that are fundamental to social mobility; it is where social networks (hypothetically) expand to create bridges between immigrants and non-immigrants that move immigrants beyond the typical ethnic 'enclave.'

Since Sewell and Hauser (1972) revised Blau and Duncan's (1967) model of status attainment, educational expectations have been considered determinants in shaping educational attainment. They have been introduced as intervening variables to mediate the effect of socioeconomic origins, in defining attainment and the consequent social mobility of students. Sewell and Hauser first tested the impact of peers, measured from proxy reports, and stated they had a strong impact on attitudes. My study has the strength of measuring the context and the effects of peers with multilevel data and context information.

Despite the relevant role of education, the concentration of children with immigrant background in schools is often perceived as negative for natives' and
immigrants' performances. The literature has pointed out two factors that affect educational performance dependent on the number of immigrant students in the schools: learning opportunities due to school characteristics and peer effects (Cebolla-Boado and Medina 2011). The sociological, economic and demographic literature has been more focused on school characteristics that shape individual educational performances. According to this perspective, segregating immigrants’ children affects immigrants' children and natives' performances. The lower levels of educational attainment among immigrant students are not due to socioeconomic or socio-cultural factors but to their segregation into the less academic parts of the education system. In most countries, students with immigrant background are not evenly distributed across schools. Furthermore, immigrants' children may be concentrated in less academic, vocational courses and programs.

Immigrant families, moreover, tend to be clustered in particularly deprived areas because of reduced economic possibilities. Immigrants usually live in specific neighborhoods where the cost of living (mainly housing prices) is lower (Rocco and Brunello 2013). In these neighborhoods, the concentration of immigrant students in schools is higher than elsewhere. These schools may perform poorly because they have difficulty attracting and retaining appropriate teachers or parents have less time and resources to contribute to children's school performances. Attending schools in deprived environments, students have to deal with two aspects: on the one hand, they have fewer and poorer materials, and on the other hand, they might have fewer human resources (Cebolla-Boado 2007). In the first case, the association is clear: in deprived neighborhoods, the allocation of economic resources will be less complete and efficient than in schools in a richer context. In the second case, intervening aspects shape the quality of the teachers. They may tend to adapt their demands to the average level of the student body, in other words, forcing teachers to set different thresholds for evaluating who passes and who fails (Duru-Bellat and Mingat 1997 in Cebolla-Boado 2007). Moreover, Boyd et al. (2003) argue that teachers prefer to teach in schools with fewer foreigners. Moreover, schools try to hire more qualified teachers. These two aspects lead to the concentration of highly qualified teachers in schools with fewer foreigners.

Having a higher proportion of students with non-native backgrounds clearly leads to the presence of more students with less language proficiency (Fekjær and Birkelund 2007). This can lead to a less competitive and motivating learning environment, since pupils with immigrant background typically perform worse than natives at school for several reasons, "difficulties with the language of
instruction, less educated parents and problems of integration" (Rocco and Brunello 2013:238), which lead immigrants to be concentrated at the bottom of the distribution of academic ability. Immigrant students are, moreover, peers with a "different culture, a different way to interact with others and, most often, limited language proficiency" (ibidem). Hence, teachers have to dedicate more attention to these students.

Consequently, teachers adjust the level of their standards to these students' levels, and spend more time working with students who need more help instead of equally distributing time among pupils (Fekjær and Birkelund 2007). This is particularly true for the Italian school system, where there is no distribution based on cognitive abilities and children are randomly assigned to classes. The Italian school system, furthermore, does not plan to create a policy to deal with the increasing number of immigrants in schools and classes.

Finally, some authors emphasize that, as a consequence of reduced standards, teachers may be less likely to recommend a higher educational track to students attending classes with low attainment performances (Fekjær and Birkelund 2007). While in other countries (Germany, for example) teachers are asked to indicate students' future academic careers, this is not the case in Italy. However, during the last year of middle school students receive an individual evaluation and recommendation regarding the imminent choice of secondary school.

Borjas (2004) examines how the growth in the number of foreign students enrolled in U.S. graduate programs affect native enrolment in those programs. He observes that the presence of foreign students had an impact dependent on the reference ethnic groups. White native men are more disadvantaged than others by the presence of foreigners, and the enrolment of white natives decreases if the number of foreigners is higher.

Gould et al. (2009) study the effect of immigrant concentration in elementary schools, using a quasi-experimental approach on Israeli data. The study demonstrates that the presence of immigrants' children in elementary schools has only small negative effects on the probability that native born students will pass their matriculation exams (prerequisites for college enrolment).

Hanushek et al. (2009) use panel data on Texas public schools. They look at compositional effects, taking into account school quality, abilities and family background. They demonstrate that the effects of the presence of black students on the educational performance of white students are small. On the contrary, they notice that black concentration affects the performance of black students.

Angrist and Lang (2008) study the effects of Metco. Metco is a voluntary program in Boston which permits disadvantaged students in certain cities to attend public schools in other communities that have agreed to participate. The authors found that there is little evidence of any impact of Metco students on the outcome of non-Metco students, declaring the effects as modest and short-lived.

The second aspect that seems to affect educational performances is given by micro-interactions among peers. "Peers affect academic motivation, engagement and achievement through information exchange, modeling and reinforcement of peers norms and values" (Ryan 2000, in Fekjær and Birkelund 2007:312). This approach is based on the assumption that immigrants' children are less inclined to high aspirations and have more negative attitudes and performances than natives' children. The interaction between natives and immigrants acts as "disincentives to investments in education" (Cebolla- Boado 2007:5).

Some authors focus deeply on the peer effect. The main idea is that "predictions of the overall effect of schooling systems seem to depend on the social interaction between high- and low-ability students and resulting peers effect" (Entorf and Lauk 2008:634). On the one hand, groups composed by ability can enhance individual performances. On the other hand, heterogeneous classrooms composed of different ability levels might increase efficiency, because less talented students have to work with higher-ability peers, and benefit from the social interaction (ibidem). As previously mentioned, this aspect is connected to the "endogenous effect" proposed by Manski (1993). The author states that the prevalence of any behavior in some reference group influences members of other groups. For instance, educational attainment may vary with the average level of achievement of students in the same peer group (Cebolla- Boado 2007).

Thus, a negative correlation between the concentration of immigrants and students' educational attainment is a well-documented empirical conclusion in both the American and European sociology of education (Felouzis, 2003; Portes and Hao, 2004; Fekjær and Birkelund 2007; Szulkin and Jonsson, 2007; CebollaBoado and Medina 2011).

Moreover, given the importance of individual students' achievements, it is not surprising that the literature on peer effects and social interaction in schooling is rapidly growing. Some authors focus their attention on the native/immigrants' children influence in schools (Hoxby 2000; Cebolla- Boado 2007; Entorf and Lauk 2008). During the last decade, attention has focused on the effects of the number of immigrants in schools on the educational attainment of natives (Borjas

2004; Gould et al. 2009; Rocco and Brunello 2013). Considering the Italian case and looking at the link between discipline, performances and the presence of immigrants' children in schools, Barbieri and Scherer in 2011, clearly stated that a too high concentration of immigrant pupils within the school has a real impact on the educational performances of students: first generation children perform considerably worse when they attend a school with high concentration of immigrants (Barbieri and Scherer in Arum and Valez 2012). In some cases (Szulkin and Jonsson 2007; Fekjær and Birkelund 2007), authors developed analyses that defined the threshold effects of ethnic concentration, establishing the number of migrants able to shape natives' performances (in the case of Sweden, studied by Szulkin and Jonsson, this threshold was fixed at $40 \%$ ).
Chapter 6.2, HP1: according to recent literature on the impact of the presence of immigrants' children on the educational performances of native students, $I$ hypothesize that a growing presence of foreign students in the school is associated with a reduction on the educational expectations of natives.

In the last part of the chapter, I will test the hypothesis already tested in the previous part of the chapter (HP5), moving my attention from immigrants' children to natives. Natives that are more in contact with the children of immigrants demonstrate much more attention to integration and, potentially, leave in a more stimulating environment. Inter-ethnic contacts, in fact, are likely to decrease negative attitudes, prejudice, perceptions of threat and sense of social distance among members of the majority population" (e.g. Pettigrew, 1998; McLaren, 2003; Pettigrew and Tropp, 2006; Wagner et al., 2006; Schneider, 2008 in Semyonov and Glikman 2009).
Chapter 6.2, HP2: I expect that perceiving friendship as relevant, and meeting friends often, could be a good indicator of social integration. Therefore, I hypothesize an association between this indicator and educational expectations and aspirations. More specifically, I consider the significance and form of friendship declared by students and test whether these aspects act positively on educational expectations. More specifically I expect that native students attending schools where there is high level of integration, measured as high number of friendship relationship between immigrants' children and natives, are associated with an increase of educational expectations and aspirations among natives.

## Chapter 2 <br> Method and data

### 2.1.1. From logistic to multilevel random effects logistic regression models

My measure of expectations is based on students' plans for the future, which result from a variety of input, including both concrete and abstract attitudes about education utilizing short range and long range perspectives. In the first empirical chapter (Chapter 4), I consider two measures of educational expectations. First, I define expectations as the intention to reach more than secondary school level and then, for those who subscribe to this ambition, I consider their expectation to choose an upper level secondary or tertiary school. The second and third empirical chapters (Chapters 5 and 6) distinguish between short-term expectations and longterm aspirations. Short-term expectations correspond to whether they have ambitions to attend high school; long-term aspirations are given by whether or not they intend to attend university.

Since all my dependent variables are dichotomous, I propose some initial descriptive analyses using logistic regression models.

Regression models are based on the statement that the value assumed by a dependent variable of interest at each observed case can be expressed in mathematical form as the result of a combination of the values of a given set of independent variables, corresponding to that case (Pisati 2003, p. 38). In the regression models, it is assumed that there is a set of characteristics of the members of the reference population, $\mathrm{X}_{1}, \ldots, \mathrm{X}_{\mathrm{p}}$, (independent variables) that are related to Y and, therefore, provide additional information for predicting Y (the dependent variable).

The model for logistic regression analysis assumes that the outcome variable, Y, is categorical (e.g., dichotomous), taking on values of 1 (i.e., the positive outcome, or success) and 0 (i.e., the negative outcome, or failure). In my analyses, the dependent variable is 1 if the child declares to have high educational expectations/aspirations and 0 if the child has not high educational expectations/aspirations.

The logistic regression model, in its additive form, can be represented as follows:

$$
\operatorname{logit}\left(p_{i}\right)=\beta_{0}+\sum_{\mathrm{K}=1}^{\mathrm{K}} \mathrm{x}_{\mathrm{i} k} \beta_{k}
$$

The $\mathrm{p}_{i}$ value is equal to $\operatorname{Pr}\left(\mathrm{Y}_{\mathrm{i}}=1\right)$. It corresponds to the probability that the variable Y takes the value 1 in correspondence to the $i$ subject. Logit $\left(\mathrm{p}_{i}\right)=\ln$ ( $\left.\mathrm{p}_{i} /\left(1-\mathrm{p}_{i}\right)\right)$ expresses the natural logarithm of the ratio between the probability that the dependent variable Y takes the value 1 at the subject $i$, and the probability that the same dependent variable Y takes the value 0 in correspondence to the same subject. $\mathrm{X}_{i k}$ denotes the value assumed by the regressor $\mathrm{X}_{k}$ in correspondence to the subject i. $\beta_{0}$, hence is the regressor predictor and expresses the value given by logit $\left(\mathrm{p}_{i}\right)$ when all regressors $\mathrm{X}_{k}$ included in the model are equal to 0 . Finally $\beta_{k}(k=1, \ldots, \mathrm{~K})$ tells us how much the logit $\left(\mathrm{p}_{i}\right)$ varies, each time the value of the correspondent regressor $\mathrm{X}_{k}$ increases by one unit, net of the effects of all the other regressors. Y is the $0 / 1$ outcome for the ith case and, $\mathrm{X}_{\mathrm{il}}, \ldots, \mathrm{X}_{\mathrm{ip}}$ are the values of the predictor variables for the ith case based on a sample of n cases. It has to be underlined that while X can be categorical or continuous, Y is always categorical.

The null hypothesis underlying the overall model states that all $\beta \mathrm{s}$ are equal to zero. To reject this null hypothesis it is necessary that at least one $\beta$ is not equal to zero in the population. In this case, the null hypothesis can be rejected because the logistic regression equation predicts the probability of the outcome better than the mean of the dependent variable Y .

The value of the coefficient $\beta$ determines the direction of the relationship between X and the logit of Y . When $\beta_{\mathrm{k}}$ assumes a positive value, then it is possible to state that, as the regressor $\mathrm{X}_{\mathrm{k}}$ associated with it increases, then the likelihood increases and the dependent variable Y takes the value 1 (and, therefore, decreases the probability that the variable Y takes the value 0 ). Conversely, if $\beta_{\mathrm{k}}$ has a negative value, it is possible to state that an increase in the regressor $\mathrm{X}_{\mathrm{k}}$ associated with it reduces the likelihood that the variable Y takes the value 1 (and, therefore, increases the likelihood that the variable Y takes the value 0 ). All my descriptive analyses are presented as binomial logistic regression and the results are showed as odds ratios.

Since I aim to avoid the underestimation of standard errors, all my descriptive and logistic analyses are corrected using the Huber Sandwich Estimator.

However, since the core aim of the thesis is to understand the role of context in defining educational expectations and aspirations, this study will be pursued using two different levels of analysis; hence, I will consider a multilevel approach. The two levels of this approach are: individuals and schools.

The school level is strictly connected with two specific research questions in Chapter 5 and 6: 1) Which characteristics of Italian children affect the school choice and educational attainment of the children of immigrants? and 2) To what extent do the presence and the characteristics of immigrants in the school affect school choice and the educational performance of Italian children?

Moreover, in Chapter 4 the context will be considered within a wider sense. Which characteristics of the school and of the relation among family and school are associated with expectations of natives and of the children of immigrants?

Since I decided to focus on the scholastic context, I identify the characteristics and conditions at the individual level and the school level that are supposed to promote or reduce educational expectations and aspirations. As explained in Chapter 2, a large body of research exists that has recently attempted to identify a variety of individual and school factors that influence individual educational performances. I decided to focus on three aspects. The first aspect aims to capture individual characteristics of the school that have an impact on educational expectations. The second aspect focuses on micro interactions that contribute to the effect that peers have on the children. The last aspect deals with school composition and considers the share of natives with high expectations (Chapter 5) and the presence of foreigners in schools (Chapter 6). To my knowledge, this approach has never been applied in the study of educational aspirations and expectations (except for the first attempt by Wells in 2008). Moreover, I introduce a new perspective, since in addition to considering the impact of immigrants on natives, I will also focus my attention on the impact that natives have on the children of immigrants.

I use the multilevel method to study the impact of context on the ambitions held by the children. Multilevel models represent a feasible approach to take into consideration heterogeneity within a school. Each school has particular and individual characteristics in terms of resources and social interactions that influence the students. This is the reason why I can suppose that children
attending the same school have a common social and cultural background that brings them to perceive their future chances in the academic world differently. My analyses include both individual level and school level variables. The second level variables aim to describe the school context. Moreover, the important technical reason for choosing the multilevel model is to control for the unmeasured school characteristics that can create bias with regard to the effect of other variables on students' educational expectations and aspirations. Ignoring hierarchical structure of the sample can lead to biased parameters, especially if observations are highly correlated within clusters. Multilevel models, in fact, assume that observations included in each cluster are not independent. Furthermore multilevel models allow me to examine how characteristics observed at second level shape the outcome variable.

I perform multilevel logistic random intercept models.
The random intercept represents the combined effect of all omitted subject-specific covariates that, in this study, can cause some subjects to be more prone to having high expectations or aspirations than other subjects.

Since the dependent variable is dichotomous, the models are in the form of logistic random intercept regression models, where the probability of having high educational ambition is equal to 1 . In particular, compared to traditional logistic regression models, I introduce a specific school $\zeta_{\mathrm{j}}$ intercept that allows for a relaxation of the assumption of independent outcomes within the same school.

Formally, I have estimated a regression equation as follows:

$$
\text { logit }\left\{\operatorname{Pr}\left(\mathrm{y}_{\mathrm{ij}}=1 \mid \mathrm{x}_{\mathrm{ij}}, \zeta_{\mathrm{j}}\right)\right\}=\beta_{1}+\beta_{1} \mathrm{x}_{\mathrm{j}}+\beta_{3} \mathrm{x}_{\mathrm{j}}+\ldots+\beta_{\mathrm{n}} \mathrm{x}_{\mathrm{j}}+\zeta_{\mathrm{j}}
$$

with $\zeta_{\mathrm{j}} \mid \mathrm{x}_{\mathrm{ij}} \sim \mathrm{N}(0, \psi)$ and $\zeta_{\mathrm{j}}$ independent between the schools j . Where $\mathrm{y}_{\mathrm{ij}}$ is the binary outcome variable for the $i$ th unit at level one and the $j$ th unit at level two and $\mathrm{x}_{\mathrm{ij}}$ is the explanatory variable.
The complete specification is given assuming that $\pi_{\mathrm{ij}} \equiv \operatorname{Pr}\left(\mathrm{y}_{\mathrm{ij}} \mid \mathrm{x}_{\mathrm{ij}}, \zeta_{\mathrm{j}}\right)$, the $\mathrm{y}_{\mathrm{ij}}$ are distributed independently as:

$$
\mathrm{y}_{\mathrm{ij}} \mid \pi_{\mathrm{ij}} \sim \operatorname{binomial}\left(1, \pi_{\mathrm{ij}}\right)
$$

After performing multilevel models, I introduce a measure able to capture the proportion of variance explained by clustering.

The within- cluster or intraclass correlation coefficient, after controlling for the explanatory variable, can be obtained from:

$$
\rho=\sigma_{u}^{2} /\left(\sigma_{u}^{2}+\pi^{2} / 3\right)
$$

I assume, for convenience, that $\varepsilon_{\mathrm{ij}}$ have a standard logistic distribution, i.e., with mean zero and variance equal to $\pi 2 / 3$ (which is equivalent to approximately 3.29). The intraclass coefficient rho $(\rho)$ is calculated as the ratio of the variance of the random effect $u_{i}$ to the total variance and, thus, it can be interpreted as the proportion of the total variance explained by the second level (Rodríguez and Elo 2003), which in my analysis are the schools.

In my analyses, I present:

1) The so-called null models, which do not include any covariate either at the first level or at the second level;
2) A first level only model, which includes only the individual and family covariates found at the first level;
3) A full model, which is composed of both individual first-level covariates and second-level variables.

The lists of dependent and independent variables will be presented in each empirical chapters. In the next section, I will introduce the two sources of data used for my analyses (PISA 2009 and ITAGEN) and comment on the strengths and weaknesses of using each of these surveys.

### 2.2. Concentration of immigrants' children and resources in the school: endogeneity and reverse causality

When scholars focus their attention on immigrants' children or on resources of the school, they have to always consider the problem of selection. Is the ambition of a student shaped by a reduced number of immigrants students, or, on the contrary a school with less immigrants' children attracts students with higher ambitions? Moreover, in the same direction, is a school with high resources attracting students with high educational expectations or, on the contrary, are the
schools' resources able to enhance the educational ambition of students? These questions are always hard to answer with the currently available data.

In my thesis I largely deal with this problem by selecting schools where I assume there are no problems of selections. Using Itagen data, it is possible to select students who attend the only school in the municipality. Hence, potentially, there is no chance to have selection. Moreover, it has to be considered that in Italy, problems of selection do not usually affect too much children attending middle school since parents usually choose the school on the basis of proximity. I check the robustness of my results, using this subsample (more details in chapter 5.3).

Using PISA2009, I found another way to deal with this problem. One of the questions asked in the school questionnaire was about the availability of other schools offering the same track and that compete for the students enrolled in the school. By only choosing students who attend the only available school in the area, there are no limits due to selection. In other words, if a student decides to attend a certain kind of school (general or vocational), he/she will surely be enrolled in the school we are investigating. Hence, I used this subsample to check the robustness of my results. I basically performed my models considering only schools without competitors in recruiting students, Due to sample restriction it has only been possible to test this for the Italian case.

Of course, due to the reduced number of cases (especially using PISA data, the number of immigrants' children is lower than 250 cases) I can not speculate too much about our results. However, it is important to notice that results obtained with these two subsamples, confirm my main model outputs.

### 2.3 PISA 2009

The OECD Programme for International Student Assessment (PISA) is a research program of the OECD member countries that aims to investigate the attitudes and school performance of 15 -year-old students. As such, PISA is an age-based survey, assessing 15 -year-old students in grades seven or higher.

The surveys (initially developed by 11 countries) take place every three years. The first survey took place in 2000 (followed by a survey of 11 additional countries in 2002), the second survey took place in 2003, the third took place in 2006, and the fourth took place in 2009. For each survey, one assessment-
science, reading, or mathematics-is chosen as the major domain and given greater emphasis. In 2009, the major domain was reading. The PISA survey seeks to understand whether or not students are able to apply the knowledge and skills they learned at school in other contexts. In the meantime, student questionnaires collect information from students on various aspects related to their home, family, and school backgrounds. The survey also provides school and family questionnaires. School questionnaires collect information from schools about various aspects of the organization and the educational provision in the schools. PISA 2009 was conducted in 65 countries and 14 countries also administered a parent questionnaire to the parents of the students participating in the PISA survey. PISA 2009 also provided an "Educational Career" questionnaire, where I could find information about the educational expectations held by the children. Question Q5, in fact, asks which level of education children expect to complete (Figure 2.1).

Figure 2.1: question on educational expectations


Source: PISA2009 EC questionnaire

The EC questionnaire was only administrated in a few selected countries. Of these, I performed my analyses for Italy and Belgium. For these countries, a sufficient number of immigrants' children had been interviewed. The PISA 2009 data have been used for many relevant statistics on educational performance, but, to the best of my knowledge, no one has yet explored these data in order to investigate educational expectations.

The PISA2009 survey allows me to develop my analyses using data for natives, and first and second generation immigrants. Moreover, I have innovative
and unexplored information on school characteristics, such as the student-teacher ratio or the proportion of high qualified teachers in the schools. Furthermore, PISA2009 includes information on the involvement of parents in school activities. All of this information allow me to develop challenging research questions.

PISA 2009's sample design involved stratification of schools and clustering of students within schools. A sampling design that consists of a simple random sample of schools would have been inappropriate as it would have underestimated or overestimated the student population size. It would also result in an important variability of final student weights and consequently increase the sampling variance. In order to avoid these disadvantages, schools are selected with probabilities proportional to their size (PPS). Without accounting for this design, the variance estimates, most notably the standard errors would have been underestimated. Because small schools were sampled at a slightly lower rate than large schools, it is necessary to use a weight variable to correct for this. Underestimating the standard errors would lead to inflated $t$ values in hypothesis testing. Inflated $t$ values, in turn, will increase the chance of a type I error, rejecting the null hypotheses. Using replicate weights, STATA produces correct standard errors and enable correct inferences to be drawn about likely true scores of and differences among student populations and subgroups.

PISA 2009 offers two sets of weights: final weights for the school or student; and 80 replicate weights for student-level estimates. The school-level final weight is used to generate the student-level final weight. The student-level final weight is necessary to produce nationally representative estimates of student continuous or categorical variables. These weights, as mentioned, were necessary to me to provide correct estimates of the sampling variance (standard error) associated with any given point estimate (e.g., mean or frequency). Nonresponse adjustment (correcting for those students who were selected but did not participate in the survey) has also be taken into consideration, because the weights of nonrespondents are distributed among the respondents with similar characteristics. Thus, weights reflect both unequal probabilities of sampling and nonresponse adjustments (for more detailed information see PISA 2009 Technical Report).

Detailed information on the sample used in my analyses will be presented in Chapter 5.2.

### 2.3.ITAGEN

ITAGEN is a survey of students living in Italy who attended middle school during the 2005-2006 school year. The survey began during the 2005-2006 school year (Casacchia et al., 2008; Barban and Dalla Zuanna, 2010; Dalla Zuanna et al., 2009; Barban and White 2011). ITAGEN is the first nationwide extensive survey focused on children with at least one foreign-born parent. It focuses primarily on the determinants of social integration and it contains a complete series of information about the school environment. The survey has been developed in two waves. The baseline questionnaire focused primarily on the characteristics of the family, the migratory process, the use of time by children, and their opinions and aspirations for the future (Barban and White 2011). Data were collected through a questionnaire filled out by the students under the supervision of a researcher and the students' teacher. The questionnaire was in part inspired by the Children of Immigrants Longitudinal Study (CILS), a large scale longitudinal investigation of the assimilation process into American society of a sample of "new" second generation teenagers.

Schools were randomly chosen among those with a foreign student body of at least $+10 \%$ in the north of Italy and $+3 \%$ in the south of Italy. In each school, researchers interviewed all the immigrants' children and one class for each cycle ( 6 th, 7 th, and 8 th grades). The subjects lived in 44 provinces, and attended 251 junior high schools. The total sample consists of 10,554 pupils who had at least one foreign parent and 10,150 pupils whose parents were both Italian. Most of the interviewees were born between 1993 and 1994. The large sample is given with the aim of guaranteeing that it be representative of all ethnic minorities and to assure different contexts. The subjects lived in 10 regions (the northern and central regions of Lombardy, Veneto, Emilia-Romagna, Tuscany, Marches, and Lazio; and the southern regions of Campania, Apulia, Calabria and Sicily. Data are weighted in order to deal with the sample design, hence results are weighted and represent the population of each province of each region, regarding the schools with more than $10 \%$ of foreign students in the North and $3 \%$ of students in the South.

As the proportion of students interviewed in each province is different, to build representative frequency distributions data are were post-stratified, separately for Italians and foreigners. The coefficient of post-stratification assigned to each interviewee is:

ITAP/Ita $a_{p}$ for Italians
STR $_{\mathrm{P}} / \operatorname{str}_{\mathrm{p}}$
for foreigners

Where ITA $_{P}$ and $S T R_{P}$ are Italian and foreign students in the province $p$, and Ita $_{p}$ and $\operatorname{str}_{\mathrm{p}}$ are the same quantities referred to the sample. Thanks to these sampling procedures and post-stratification, the ITAGEN2 data are statistically representative of the Italian and foreign students of 48 Italian provinces, attending school year 2005-06 junior high state, the proportion of foreigners than $10 \%$ (Centre-North) and 3\% (South).

Although the total data set is comprised of 20,528 cases (11,910 Italians and 8,618 immigrants' children), my sample is reduced to 6,791 cases $(4,037$ Italians and 2,724 immigrants' children) since I focus on children attending the 8th grade. My choice is strictly related to my aims. Since I want to investigate aspirations, i.e., plans for the future, I have to consider that ambitions differ over time, as young people accumulate concrete scholastic experiences (Kao and Tienda 1998). Thus, the expectations of children attending previous scholastic years ( $6^{\text {th }}$ and $7^{\text {th }}$ grades) may be less realistic because the reality of secondary school and university is so distant for them, while the children attending school during the $8^{\text {th }}$ grade year in which the choice of continuing education has to be made are probably much more realistic about their own likelihood of attending secondary school which, in the Italian system implies the possibility of gaining access to tertiary education (Checchi and Flabbi 2006).

ITAGEN data collection has been complemented by a follow-up. 1,889 Italian students and 1,089 foreign students in the provinces of Vicenza and Padua (North), Marche (center), Apulia, Calabria and Sicily (South) were contacted again, in 2008, by telephone. For both Italians and foreigners, the proportion of unit-non-response (attrition) between the first and second wave is relatively high ( $31 \%$ to $54 \%$ for Italians and foreigners). Despite some calculations have already been proposed to deal with this problem (Barban and White 2011), the low number of cases among immigrants' children, and, moreover, the lack of information on educational expectations in the second wave of ITAGEN, make the use of these data improper for this thesis.

My measures of short-term expectations and long-term aspirations are derived from the following questions: "Which secondary school do you think you will attend?" and "Do you think you will go to university?" High educational
expectations are measured as secondary-school expectations for short-term plans (relative to vocational, technical, or no upper secondary plans) and university plans for long-term ambitions or aspirations (relative to no university plans). I differentiate between licei and all other options because, although technical schools do not preclude university access, official data show that students who attend technical schools are highly unlikely to pursue a tertiary education. Hence I obtained two dummies, indicating high and low educational expectations and aspirations.

Table 2.1. Dependent variables using ITAGEN questionnaire
Which secondary school would you Do you think you'll go to like to attend? college?

| $1\left\|\_\right\|$None | $1\left\|\_\right\|$Yes |
| :--- | :--- |
| $2\left\|\_\right\|$Vocational or techincal school | $2\left\|\_\right\|$No |
| $3\left\|\_\right\|$High school | $3\left\|\_\right\|$I don't know |
| $4\left\|\_\right\|$I don't know |  |

I integrated ITAGEN data with the number of foreign children involved in each school participating in the sample during the 2004-2005 school year. Official data were drawn from the Ministry of Education data and they were used to identify schools eligible for the sample. Using this official information, I calculated the share of foreign students present in each school.

Detailed information on the sample used in my analyses will be presented in Chapter 6.2.2.

### 2.5.Strengths and weaknesses of the data

This section will explain why I decided to consider using the ITAGEN and PISA surveys to implement my analyses. Afterwards, I will list the weaknesses of my data.

As previously mentioned, ITAGEN is the first nationwide extensive survey that focuses on children with at least one foreign-born parent. Hence, it is the only Italian source that specifically considers comparisons between native children and immigrants' children. It is the only Italian survey focused on educational expectations. Moreover, since the questionnaire was in part inspired
by the Children of Immigrants Longitudinal Study (CILS), it guarantees that my results will have future comparability with the results obtained by the CILS and other similar surveys. Moreover, the large sample allows me to obtain good information about the children of immigrants and it enables me to examine different countries of origin. Furthermore, being able to analyze the Italian case using this dataset affords me a unique opportunity to explore the topic with a new national perspective.

The PISA survey first offers me the chance of working with educational expectations guaranteeing me the opportunity to compare results from different countries. Moreover, I can evaluate the differences between the countries to determine the extent to which the schools moderate or increase the effects of individual-level student factors and student achievement and I can assess the differences in educational systems and national context that are related to the differences in student achievement across countries. PISA 2009 is the most recent survey and no one has yet explored these types of expectations using this source.

Both sources allow me to look at differences in the relationships between school-level factors and achievement. The PISA survey offers me the chance of doing so in the context of a comparative perspective.

Despite the high level of comparability the way in which PISA2009 surveys were carried out, the questions posed are not the same in all survey. The Educational Career Questionnaire (the one where my dependent variable is drawn from) has not been collected in all the countries. Moreover, some countries lack of relevant information: the country of origin of parents. This information is extremely important for scholars who investigate immigrants' children. Unfortunately, while the distinction between natives and children of immigrants' is possible in every country, data about country of origin of the children of immigrants are not available for the Italian sample. For this reason, I can not include the country of origin in my analyses developed using PISA2009. Nevertheless, I present the analysis of this relevant variable in Chapter 6.2.4, where I consider the immigrants' children living in Italy using ITAGEN survey.

The ITAGEN data have some weaknesses with respect to the purposes of this study. One relevant limit refers to the selection of our sample. The schools have been identified by stratifying the presence of immigrants in the schools. Therefore, we have to acknowledge that our results do not refer to the entire Italian context. In particular, I have to point out that schools in the south of Italy with more than $3 \%$ of foreign students only represent $9.5 \%$ of the entire population of that region and the schools in the central and northern parts of Italy
with more than $10 \%$ of foreign students only correspond to $27 \%$ of the entire schools in those regions. Hence, our results can be extended to the context of really high migration.

Another limit of data concerns the fact that the children have directly provided information on the educational background and work position of their parents. This leads to a high number of missing values. However, my results correspond to the findings described in recent literature on the theme of educational aspirations and expectations (but they are more in keeping with general literature on educational outcomes). Our findings also correspond to the recent literature regarding higher levels of human capital and socioeconomic position related to higher educational ambitions. Therefore, I can be optimistic about the effective correspondence between the registered socioeconomic and educational positions of the children's parents.

Moreover, while ITAGEN does not offer any objective or measured information about language skills and school attainment (with the exception of self-reported measures of attainment and language abilities), the PISA survey offers the chance to take into consideration both the language spoken at home and measured performance. Through the collection of such information at the student level and the school level on a cross-nationally comparable basis, PISA adds significantly to the knowledge base that was previously available from national statistics, such as aggregate national statistics on the educational programs completed as well as the qualifications obtained by individuals.

Finally, neither PISA nor ITAGEN are panel surveys. The lack of repeated measurements does not allow me to develop causal inference in the study of educational expectations and aspirations. Nevertheless, I exploit my data, proposing challenging research questions and using in an innovative way both PISA and ITAGEN data. While I cannot exploit multilevel modelling by, for example controlling for omitted variables using fixed effects models, I can use random intercept multilevel models to develop my analyses exploring the impact of school characteristics on educational ambitions.

# Chapter 3 <br> Different school systems and patterns of migration The context of the study 

3.1. The presence of immigrants' children in Italy and Belgium: an overview

The growing presence of the children of immigrants in European school systems has been a striking demographic and social change for the last several decades. Immigrants' children are increasingly important in European societies, and many young people in the educational system have a immigrant background. Previous research has indicated that many of these young adults attain lower educational levels, have higher rates of dropout and have more difficulty in translating their educational credentials into a position on the labour market (for an overview see Heath et al. 2008). Earlier studies however show that educational aspirations and expectations are not necessarily lower for immigrant or minority students. On the contrary these students as well as their parents often do have high educational expectations. Nevertheless most of the research on educational aspirations and expectations still comes from North America. Research in European countries has been scarce so far, but is highly needed given the changing face of European student populations.

The new wave of global immigration has numerous implications for any country's institutions and social structures. The impact of immigration on the processes of educational attainment is fundamental to understand the engines of social stratification.

Migration flows, in fact, represent a challenging issue for the education system, especially for the new immigration countries. In the meantime, countries of recent migration represent a challenging issue for social scientists because they have to face rapid changes in all the relevant aspects of social life.

My analyses focus on two countries: Italy and Belgium.
Italy was a country of emigration until the '90s, but during the last couple of decades the flow of immigration has begun to increase drastically. Immigrants to Italy at the beginning of the period came mainly from Sub-Saharan and other African regions, while in the second phase of the immigration course, after the extension of EU boundaries, migration from Central and Eastern Europe has
become predominant (Eurostat 2009). Recent data show that the percentage of foreigners residing in Italy reached 7.5\% of the population in 2011 (Istat 2011).

Belgium, on the other hand is a country with a long immigration history reflected also in a heterogeneous immigrant population. Contrary to other European countries, intra European (and more specifically EU) migration to Belgium has been important for a long time already. Also in recent years almost half of the immigrants coming to Belgium have an EU origin; $45 \%$ of all workingage immigrants come from EU-15 countries (OECD 2009). $6.2 \%$ of those residing in Belgium come from another country of the European Union and 2.9 \% from a non-EU country (Eurostat 2010). Among the non-European immigrant origins, the Turkish, Moroccan (both countries from which low-skilled labour migrants were recruited in the 1960s) and Congolese (nationals of the Democratic Republic of the Congo and former Belgian colony) communities have the largest numbers of citizens in Belgium.

Graph 3.1 shows the increase in time of the migration flows during the past years. While the presence of immigrants in Belgium is high and constant in time, Italy has revealed a net increase since 2000. Italian trends suggest an increasing trend for future years.

Graph 3.1. Percentage of immigrants in total population from 1997-2007


Source: personal elaboration of OECD data

This diversity in migration histories is also reflected in the presence of children of immigrants in the schools in each of the countries and, consequently, in the level to which the system could adapt to students of immigrant origins. Foreign students in the Italian school system in the academic year 2008-2009
were $7 \%$ of the whole student population ( 629.360 persons out of a total of 8.945.978) (Miur data 2011). And this percentage was slightly higher (8.3 and $8 \%$ ) when also including primary school and middle school. Over the past 10 years the presence of children of immigrants in Italian schools has increased by almost six times. Immigrants, whose presence is significantly lower in secondary than lower educational levels, display higher probability of enrolling in vocational schools and lower propensity to choose general and pre-academic schools (Barban and White, 2011; Azzolini and Barone, 2011).

Children of foreign origin in Belgium account for approximately $30 \%$ of pre-primary and primary level pupils. In Wallonia (the French-speaking part of Belgium), $20 \%$ of secondary school students are foreigners. Previous studies have consistently shown an educational disadvantage of children of immigrants who are represented more in technical and professional schooling than in general academic tracks. For example while $15 \%$ of Belgians are attending technicalprofessional classes, about 70\% of Turkish students attend these sections (Baysu and De Valk 2012; Jacobs and Rea 2011; Manço 2010).

Educational systems of the studied countries plan compulsory school until the age of 16 . Our sample is composed of 15 year old students. They are all still involved in compulsory education. All systems distinguish among three different tracks of secondary school: general, which prepares the kids for college or university, technical, which prepares for both a professional or an academic career, and vocational tracks, which prepares for the labour market. After secondary school all countries offer the triple choice of either leaving the educational system and entry into the labour market, choosing tertiary education (university courses) or choosing courses upper to secondary school.

Since my aim is to test expectations to attend university and post secondary school, the focus on these two countries is moreover justified by differences in term of access to university among natives and immigrants' children. If we look at the population with tertiary level of education, it is clear that the percentage of Belgian citizens that has attained tertiary education is much higher than that of Italians, despite their age (Graph 3.2).

Graph 3.2. Population that has attained tertiary education (2010)
Percentage, by age group


Notes: 1. Year of reference 2002; 2. Year of reference 2009; 3. Year of reference 2000. Source: OECD 2012

Looking at things in more detail, if we consider the percentage of foreign students as percentage of student population in the host country, it is clear that the picture is very different between the two countries.
If we look at the second stage of tertiary education, the distance between Belgium and Italy is evident. Even looking at upper secondary school (here called first stage of tertiary education), Belgium is over the mean of the European Union, while the percentage of foreign children attending tertiary school in Italy is extremely low.

Since the focus of this thesis is to understand whether different resources in the school lead to different educational expectations, it is clearly important to consider how the resources are distributed in the two countries. I will investigate how different resources are distributed across Belgian and Italian school. I consider one of the most commonly used variables to indicate resources of the school: the student/teacher ratio.

Graph 3.3 reports the number of students per teacher in lower secondary school. It is clear that, in this case, the number of students per teacher is below the European mean in both Italy and Belgium. In this case, the counties show a similar pattern. It has to be mentioned that if the number of students per teacher is higher, immigrants' children are disadvantaged because they cannot benefit of the help of teachers. As defined in my research hypotheses natives do not benefit as
much from the teacher's attention as well, and their performance can also be reduced.

Graph 3.3: Number of students per teacher in full-time equivalents, lower secondary school


Data: OECD 2012

Another common aspect derives from the definition of the autonomy of schools in the decision making process. If schools are autonomous, they can both decide the allocation of the resources, and include parents in the definition of strategy of the school. Also in this case, official data confirm the presence of a similar pattern between Italy and Belgium.

Graph 3.4: Percentage of decisions taken at each level of government in public lower secondary education (2011)


Countries are ranked in descending order of the percentage of decisions taken at the school level.
Source: OECD (www.oecd.org/edu/eag2012).
Belgium and Italy present differences in terms of migration histories and participation within the tertiary level of education. However they do not differ in terms of school resources and the autonomy of schools in the decision making process, and consequently in the possibility to involve parents in school decision. These aspects will be faced in the chapter where I propose the comparison between Italy and Belgium.

However, considering the explained differences between countries and the richness of the two datasets used in this thesis (PISA 2009 and ITAGEN), I will test my hypotheses emphasizing any eventual relevant territorial differences. Afterwards, I will deepen my analysis, focusing on the Italian case.

This chapter is devoted to a brief presentation of the organization of the two countries' educational systems.

### 3.2.The Italian school system

The current Italian education system (see Figure 3.1) guarantees free access to each level (even if families choose private schools) and it progresses as follows:

- Preschool (duration 3 years, not compulsory)
- First cycle: Scuola primaria (primary school, duration 5 years) and Scuola secondaria di primo grado (middle school, duration 3 years)
- Second cycle: high secondary school (duration 3-5 years)
- University (duration 3+2 years)

The first cycle consists of two steps: Scuola primaria (primary school) and Scuola secondaria di primo grado (middle school). The last culminates in a state exam. A student passing this examination is entitled to access the second cycle. I think it is relevant to emphasize that one of the declared goals of middle school is to increase social interaction of students while enhancing the ability of independent study. It organizes and enhances knowledge and skills, also related to traditional cultural, social cultural and scientific evolution, also through literacy and in-depth information of technology. Moreover, it progressively develops skills and the ability to choose the appropriate attitudes and vocations of students, providing suitable tools for the prosecution of education and training. The study of a second European Union language is recommended for the subsequent choice of education and training.

The second segment of education (high secondary school) is actually divided into different alternative tracks: licei (high schools and art schools), istituti tecnici (technical institutes), istituti professionali (vocational schools). Attending school in Italy is compulsory until age 16. The first cycle is therefore expected to end at 14 . Hence, the choice of secondary school is a turning point in a student's life. Each track can potentially be followed by tertiary education (after five years of secondary education). However, both official data and recent research demonstrate that choosing high school encourages access to the university level. The vocational track, even if it does not exclude access to tertiary education, is more related to work than to a university. Technical institutes are both oriented to guarantee immediate professional opportunities, providing expertise directly applicable on the labor market, and they guarantee good training for access to tertiary education. Official data confirm this tendency: more than $57 \%$ of students who are enrolled in a university graduated from high school as
opposed to $5.6 \%$ of students coming from the vocational track (authors' calculation, from MIUR 2009/2010).

Figure 3.1. The Italian educational system


Note. Grey area indicates that this level is compulsory

### 3.3 The Belgian school system

The Belgian school system is compulsory between the ages of 6 and 18 years. Pre-school education between the age of around 2 to 6 is relatively common and sometimes incorporated in primary school. The educational system is managed separately from three different regions of Belgium (Flanders, Wallonia and Brussels-Capital). Nevertheless, the type of schooling is the same. The Belgian schools are further divided into three groups: private, public and community-regional schools. Furthermore, as a result of the three official languages of Belgium (Dutch, French and German) education in schools is in principle provided in one of these languages. Besides the wide public and community level schools in each of the regions, there are also private schools in Belgium. The latter are less common and often ask high tuition fees of the pupils.

For those who opt for self-study, there is the obligation to pass an exam every year in front of the CEC (Central Examencommissie) dependent on the Flemish government, which certifies the level reached by the student.

The Belgian educational system is divided into three levels: primary, secondary and academic. The elementary school is moreover divided into childhood (kleuteronderwijs-Einseignement maternel) and elementary school (Lager Onderwijs-Enseignement primaire). The first level lasts until the child is 6 years old, the second from 6 to 12 years. The upper level is concentrated in the high school (Secundair Onderwijs-Enseignement secondaire) from 12 to 18 years. The Belgian academic level (Hoger Onderwijs-Enseignement supérieur) develops in the university (Université-Universiteit), technical institutes and technics (Hogeschool-Haute école) tracks.

At the end of primary school, the student obtains a diploma and proceeds to attend secondary education. If a student is not able to earn his diploma, it is still possible to obtain this certificate in the first year of secondary education often referred to as Brugklas. The student receives the same type of training given during primary education, earning a certificate that permits him to pursue secondary education losing a school year. The two years BSO preparation is vocational secondary education in which the student chooses a specific profession. In this case the student does not lose any school year because they proceed directly to the second level, renouncing any other educational path.

Secondary education (12 to 18 years) is divided into 3 biennial levels: a common two-year period (from 12 to 14 years) when students study the same subjects (but divided into an A and B stream see figure 3.2 of the Flemish region of Belgium); the second period ( 14 to 16 years) when the pupil can choose between different tracks; the last period (16-18 years) which brings to diploma.

Different available tacks include ASO (general secondary education), which prepares pupils for college or a university; KSO (artistic secondary education), a preparation for further studies in art, offering the same instruction as ASO; TSO (technical secondary education), practise for both a professional and
an academic career, if developed in the same field; BSO (secondary vocational education) prepares students for the world of work. For those who attend BSO (secondary vocational education), an additional year of study is required to obtain a degree (otherwise, one only receives a certificate of achievement), which also meets the requirements for entering a university.

Education is defined "secondary cascade". Students can change the address of studies undertaken both in the second and third period of secondary education, but when it happens, in most cases, is to "fall" progressively from general education ASO-TSO up to the technical training BSO.

Another possibility during the second period is to attend a school specializing in DBSO (Part-time secondary vocational education), which includes 2 days of school (offering basic knowledge of language and math, knowledge related to the specific branch undertaken, e.g., catering, administration), plus 3 days of work (for up to 19 hours weekly). Children who attend this course have great difficulty in finding a job due to limited capacity. The qualifications that the students receive after 2 years are comparable to those received in the second two years of BSO (secondary education).

In addition the child may opt for an apprenticeship course organized by Syntra centres (for artisans) that provides one day of school and four of work. The student can learn to work as a baker, plumber or butcher.

First-generation immigrant children aged between 6 and 12 years have direct access to primary education. Those over 12 years are obligated to attend a OKAN course for one year within the Flemish specific schools, to be included in their normal secondary education (in the case of education received in the country of origin, it is equivalent to asking approval to the Department of Education in Brussels to take in consideration the age and level of the Flemish reached).

Since April 2009 the organization of advanced secondary education and higher vocational education in Belgium has changed. Advanced secondary education courses are vocationally-oriented and lead to a recognized educational qualification. They contain a relevant component of on-the-job learning, educational activities aimed at general and/or vocationally-oriented competences where course participants learn their skills in a work environment.

Studies at university provide two different tracks. One-cycle lasts for three years and prepares students for careers in industry, commerce, agriculture, health and rehabilitation, social work, teaching, informatics, applied arts or the media. Two-cycle tracks are divided into two periods of a minimum of two years each and are more academic. The final qualification of the second cycle is called Kandidaat. One-cycle programmes lead to such titles as social worker or midwife. Two-cycle programmes lead, for example, to the title of engineer or architect.

Figure 3.2. The Belgian Educational system


Source: Ministry of the Flemish Community. Education Department. 2005.

### 3.3.Children of immigrants in the Italian school system

My thesis is focused on immigrants' children, so it is clearly important to look at their presence in the Italian school system. The most recent official data on their presence refers to the school year 2007-2008. Students with non-Italian citizenship in the national school system were $6.4 \%$ of all pupils, corresponding to 574,133 units. Nearly eight percent ( $7.7 \%$ ) of students attending primary school are foreigners, so are $7.3 \%$ of students in secondary level. Although preschool is not compulsory, the presence of non-Italian students represented a significant share of $6.7 \%$. Since migration is an increasing phenomenon and since cases of drop out are extremely frequent for non-natives students, the presence of foreigners in high secondary school was small: just $4.3 \%$. I can observe that generally the presence of immigrants in each step of education is increasing year by year, and in 2007/2008 it was almost five times higher than during 2001/2002 (Table 3.1).

Table 3.1. Percent of students with non-Italian citizenship by school level (1996/1997-2007/2008)

|  |  |  |  |  | Secondary |
| :--- | ---: | ---: | ---: | ---: | ---: |
|  | Total | Preschool | Lower <br> Primary <br> School | Upper <br> secondary <br> school | secondary <br> school |
| $1996 / 1997$ | 0,7 | 0,8 | 1 | 0,6 | 0,3 |
| $\ldots$ |  |  |  |  |  |
| $2001 / 2002$ | 2,2 | 2,5 | 3 | 2,5 | 1,1 |
| $2002 / 2003$ | 2,7 | 3 | 3,7 | 3,1 | 1,3 |
| $2003 / 2004$ | 3,5 | 3,6 | 4,5 | 4 | 2 |
| $2004 / 2005$ | 4,2 | 4,5 | 5,3 | 4,7 | 2,4 |
| $2005 / 2006$ | 4,8 | 5 | 5,9 | 5,6 | 3,1 |
| $2006 / 2007$ | 5,6 | 5,7 | 6,8 | 6,5 | 3,8 |
| $2007 / 2008$ | 6,4 | 6,7 | 7,7 | 7,3 | 4,3 |
| $2008 / 2009 *$ | 7 | 7,6 | 8,3 | 8 | 4,8 |

[^0]Official data provide aggregate information on the increasing number of foreign students present in and graduated from Italian universities. This field is actually almost unexplored in Italy mostly because of scarcity of data measuring high educational aspirations and achievement. Official data are also not very complete on this field. MIUR only offer data on the increasing number of foreign students present in and graduated from Italian universities, and the most recent data on university enrollment refers to 2006. Foreign graduates were almost $2 \%$ of the total of $300,735(5,027)$. They are supposed to be different from immigrants' children, and I have no information about their status. For example, considering that most of these foreign graduates come from other European countries, it is possible to hypothesize a different cultural approach to their permanence in Italy (different migration strategy) than those of children of immigrants and second generations.

Foreign students in the Italian school system in the scholastic year 20082009, moreover, were $7 \%$ of the whole scholastic population (629.360 units of 8.945.978) (Miur data). The percentage was higher ( 8.3 and $8 \%$ ) if considering primary school and middle school. The share of foreigners is not equally distributed in the schools. Most of the foreign pupils are concentrated in the Northern regions: Lombardy in 2008-2009 was the region with the highest number of foreigners. $2.8 \%$ of schools in Italy have a higher than $30 \%$ of foreign pupils. Almost half of the schools ( $47.5 \%$ ) have from 0 to $10 \%$ of foreign pupils, while in the $26.2 \%$ of schools there are no foreigners at all. Most of the schools with $10 \%$ of foreign students belong to the Middle school and Primary school cycles.

Graph 3.1. Italian schools for share of foreign students and for school level
(school year 2008-2009)


Source: personal elaboration of ISTAT data (ISTAT 2011)
Despite a reduction to the Italian population due to negative fertility trends, the number of students attending middle school has remained substantially stable throughout the past school years. This trend is only possible thanks to an increase in the number of students with foreign origins (graph 3.2).

Graph 3.2. Total number of students in Italian middle school and presence of foreign students (AS.
2004/2005-2008-2009)


Source: personal elaboration of Miur data (www.miur.it)
The presence of foreigners (and second generation immigrants) in schools leads to some new and challenging questions that social scientists cannot ignore.

Therefore, I implement my analyses by looking at the effects the presence of foreign students has on Italians' educational aspirations and the expectations of pupils attending middle school.

## Chapter 4

## Educational expectations and aspirations in Italy and Belgium An overview

In this chapter I present some descriptive analyses in order to provide more complete and detailed information about the educational expectations and aspirations of the children of immigrants and the natives living in Italy and Belgium. Firstly, I propose information about the educational expectations of the 15 years old students, derived from the analysis of PISA2009 data. Secondly, I focus my attention on the Italian case, proposing a detailed picture of the expectations and aspirations of the 14 years old children attending Italian middle school.

> 4.1 The educational expectations of 15 years old natives and immigrants' children in Belgium and Italy

My first aim is to shed light on the educational expectations of students in the two studied countries. I found that overall almost $60 \%$ of the students interviewed in the two studied countries expressed that they expect to continue their academic career after the end of secondary school. Of these students, who expect to continue after secondary school $65 \%$ expect to reach tertiary level and $35 \%$ upper secondary courses. I found some differences in expectation between students of immigrant origin and native students. $60 \%$ of natives expect to reach higher than secondary level, compared to $56 \%$ of second generation and $48 \%$ of first generation immigrant students. The expectation to obtain a university degree was expressed by $65 \%$ of natives, $56 \%$ of second generations and $59 \%$ of first generations.

Differentiation is evident if I consider the country in which the students live. While existing studies often only focus on one country, in my research I expand the comparison to two European countries with different migration histories. Explorative analyses first gave me some details on the educational expectations of natives and children of immigrants in each of the two countries. Figure 1 indicates the percentage of students who expect to continue their academic career beyond secondary level of education.

In both of the considered countries, first generations have a higher propensity to expect finishing their career maximum at secondary level. Belgian natives are more prone than all the others to expect continuing their academic career after secondary school. Furthermore we find differences between origin groups in the two countries. In both Italy and Belgium, the percentage of students with educational ambitions clearly decreases from natives to those students who recently arrived (belong to the first generation). The difference between first and second generation children living in Italy is the smallest of between the countries and overall, these immigrant students expect to leave school at the end of secondary school or before reaching secondary diploma more than natives. From this first analysis, second generations seem to have higher expectations than first generation students. Multivariate models will show how the situation changes if we take into account different individual, school and parental characteristics.

In a second step, I focus my attention on the expressed ambition to reach tertiary level of education for those who expect to go on after secondary level, reflected in figure 4.2. Contrary to what I saw for overall expectations on continuation of school (Figure 4.1), I found that Belgian native children have the lowest level of educational expectations; while the percentage are more positive for their immigrant counterpart who are more likely to expect to go to university. In Italy the percentage of students with academic expectations clearly decreases from natives to students who arrived recently.

Figure 4.1 Percentage of students expecting to continue after secondary in the European countries by migration status


Figure 4.2 Percentage of students expecting to reache tertiary education in the European countries by migration status


If I compare the gap in expectations between children of different migration statuses, I obtain a direct measure of the extent to which immigrant origin in that country might be a relevant determinant for expectations (Table 5.1). Looking at the students' expectations to continue on with their education after completing secondary school, it is evident that all the immigrants' children have lower expectations than their native counterparts.

Examining children's expectations of reaching the tertiary-level of education, I can clearly see two patterns. In the north-western European country (Belgium) immigrants' children have the same or higher expectations as natives, while in the southern European country (Italy), the gap between natives and immigrants' children is negative for the immigrants. Italy demonstrates the highest differentials between natives and children of immigrants.

Table 4.1 Gap (in percentage points) between immigrants and natives in the expectations to continue after secondary education and to reach tertiary education

|  | Belgium | Italy |
| :--- | ---: | ---: |
| Expectations to continue after secondary level |  |  |
| Second Generations vs Natives | -10.93 | -10.39 |
| I generation vs Natives | -17.52 | -12.09 |
| Expectations to reach tertiary level |  |  |
| Second Generations vs Natives | 1.53 | -8.11 |
| I generation vs Natives | 11.74 | -14.61 |

These first preliminary analyses need to be expanded in much more detail in order to capture the differences between Italy and Belgium. I expected to find different patterns between Italy and Belgium, and my first descriptive analyses do, in fact, reveal the unique situation of each studied country. The previously mentioned differentials in the migration histories of the two countries and the dissimilarities between the countries of origin of their immigrants can partially contribute to explaining these differences. Moreover, I will deepen the analyses of first generations' expectations, distinguishing on the bases of timing of arrival to the host country.

In the next chapter (chap. 5), I will look at the impact of human capital measures and the school environment. I will also examine the new measures of family context in terms of the interactions between school and family, and I will consider the distinctions among countries and between natives and immigrants'
children. In the multivariate models, these different spheres of influences can be better disentangled to grasp the main mechanisms that lie behind the educational expectations of children of diverse origins.

In the next section, I will first propose evidence from the Italian case. I will compare educational the expectations and aspirations of immigrants' children and natives aged 14 and attending middle school.
4.2 The educational expectations and aspirations of natives and immigrants' children attending the final year of middle school in Italy

Table 4.2 presents average differences in licei and university expectations by birthplace (native vs. foreign-born) and age at migration. Native Italians are more likely than their foreign-born classmates to report that they expect to attend high school and college, but there is some variation by age at arrival. Secondgeneration immigrants have similar ambitions to native Italians, especially for college aspirations. Adolescent immigrants (age at migration 10 to 13) have the lowest short-term expectations, as only 23 percent of those who arrived after age nine reported that they expected to attend high school, compared with 48 percent of the natives. It is noteworthy that among immigrants, college aspirations are always higher than high school expectations. Although polytechnic or vocational schools do not prevent access to a university education, it's well known that most students who select these tracks are far more at risk of never attending college.

Table 4.2. Upper secondary school and university expectations by generational status (data: ITAGEN)

|  | Educational <br> expectations <br> (\%) High school | Educational <br> aspirations <br> $(\%)$ University | $N$ |
| :--- | :--- | :--- | :---: |
| Natives | 47.7 | 48.5 | 2.296 |
| Second Generation immigrants <br> Preschool immigrants <br> (age at immigration 0-5) | 43.9 | 48.1 | 645 |
| Childhood immigrants <br> (age at immigration 5-9) | 27.9 | 39.0 | 282 |
| Adolescent immigrants <br> (age at immigration 10-13) | 25.5 | 32.5 | 560 |

Table 4.3 reports the results of two logistic regressions that evaluate whether generational status is associated with educational ambitions - both shortterm expectations and long-term aspirations - after controlling for background characteristics (for the details on variables, refer to Chapter 6.2). Nativity differences in educational ambitions persist even after controlling for family background and other demographic characteristics. Foreign-born youths have significantly lower high school expectations compared with native Italians. With the exception of youths who migrate during middle childhood (ages five to nine), I do not observe significant differences in long-term aspirations compared with natives. This may be due to the fact that for eighth graders, university options are in the distant future and difficult to envision, unlike the concrete choice of which high school track they will pursue the following year. In fact, high school expectations decrease monotonically with age at migration. That the educational expectations of second-generation Italian immigrants do not differ substantially from those of native Italians confirms the conclusions of U.S.-based studies (Portes and Rumbaut 2001; St. Hilaire 2002) for Italy.

Table 4.3. Logistic regression models: educational expectations of children of immigrants and Italians. Odds ratios (data: ITAGEN)

|  | Expectations | Aspirations |
| :---: | :---: | :---: |
| Migration status Ref. Natives |  |  |
| Second Generations immigrants | 0.90 | 0.99 |
|  | (.105) | (.123) |
| Pre-school immigrants | 0.57*** | 0.94 |
|  | (.056) | (.135) |
| Childhood immigrants | 0.49*** | 0.72** |
|  | (.064) | (.086) |
| Adolescent immigrants | 0.45*** | 1.03 |
|  | (.046) | (.101) |
| Sex: Female | 3.44*** | 1.93*** |
|  | (.237) | (.160) |
| Zone of residence Ref. North |  |  |
| Centre | 1.19* | 1.08 |
|  | (.102) | (.092) |
| South | 1.85*** | 1.67*** |
|  | (.248) | (.241) |
| Socio economic status | 1.04*** | 1.03*** |
|  | (.003) | (.003) |
| Parents' education level Ref. High |  |  |
| Medium | 0.55*** | 0.48*** |
|  | (.039) | (.033) |
| Low | 0.32*** | 0.26*** |
|  | (.502) | (.049) |
| Unknown | 0.37*** | 0.22*** |
|  | (.570) | (.033) |
| Number of siblings Ref. 0 |  |  |
| 1 | 0.87 | 0.83 |
|  | (.100) | (.092) |
| 2 | 0.83 | 0.66*** |
|  | (.104) | (.091) |
| 3 | 0.77 | 0.68** |
|  | (.106) | (.137) |
| More than 4 | 0.56** | 0.60** |
|  | (.114) | (.116) |
| Mixed couple | 1.01 | 1.13 |
|  | (.135) | (.152) |
| N | 5.072 | 5.072 |
| Pseudo R-square | 0.16 | 0.12 |

Notes: $* * *<0.01^{* *<0.05 *<0.1 \quad \text { Analyses are weighted and presented as odds ratios. }}$

Gender is significantly associated with short- and long-term educational goals. Females have higher educational goals than males, a difference that is particularly evident in short-term expectations, as shown in other studies (Feliciano and Rumbaut 2005). Regional differences in educational expectations also are evident, particularly between youths living in the North of Italy versus the South. Family resources also define the educational expectations of children. And in alignment with prior studies, family background is associated with attitudes: having highly educated parents is associated with high academic expectations and aspirations. Results indicate that short-term expectations are much lower for children whose parents are low-skilled than for those whose parents are highly skilled. Having two or more siblings is associated with lower educational aspirations when compared to being an only child.

To conclude this descriptive section, I propose some considerations. Firstly, although natives have higher expectations than immigrants' children, differences are not present if we refer to aspirations. In the second case, I refer to abstract attitudes, which are popularly held beliefs about education, including education as a means of socioeconomic mobility. Concrete attitudes, instead, reflect actual experiences of a particular group, including labor barriers (Wells 2008). Hence, immigrants' children have realistic perceptions of the limits of their imminent choice, and tend to be more optimistic (and unrealistic) when looking at the far future. Part of this ambivalence (having the same long-term aspirations as Italians without corresponding effective short-term expectations) could be due to a lack of knowledge of the Italian school system. Although students potentially can proceed to university after each educational track proposed by the system, in reality most of the students attending university come from licei, a choice made by few students with immigrant background. Moreover, since differences remain after controlling for other covariates, the differences are due to the unequal class stratification of immigrants and natives and clearly depend on the students' migration backgrounds. My analyses, in fact, will show that part of the differences between natives and immigrants' children living in Italy is captured by the students' length of residence in the host country: second generations have the same educational ambitions as natives, while recent immigrants have much lower ambitions than natives.

# Chapter 5 <br> The role of parental involvement, school resources and family environment on educational expectations of natives' and immigrant children in Italy and Belgium 

### 5.1 Introduction: motivation and background of the study

This chapter aims to define to what extent school context, parental background and their involvement in school can interact to shape the educational expectations of immigrants and natives in two European countries: Belgium and Italy. I distinguish between two educational expectation measures: those students expecting to continue their academic career after completing secondary level and those who expect to reach tertiary level education. I will use PISA 2009 data concerning children who are 15 years old. While many existing studies focus on the expectations of either first or second generation students in only one country, PISA2009 data allow for a direct comparison of children of immigrants (including both generations) across two European countries. In addition, the data are unique in the sense that they cover detailed information on school context and resources as well as information on parental involvement in the school, aspects expected to be relevant but hitherto hardly studied empirically on a large scale.

The chapter aims to answer several research questions. Firstly, I explore the role of school context and resources on the educational expectations of children of different origin in each of the study countries. Secondly, I explore the interaction between parents and the schools and, more specifically, parents' involvement in the school, in order to define the impact that this interaction has on the educational expectations of children from diverse backgrounds. Since school and family are supposed to cooperate in the aim of giving the child the chance to pursue his or her ambitions, I will look at the cooperation between these two institutions. I will investigate the association between this form of interaction and individual educational expectations. Meanwhile, I will explore the impact of school resources on the educational expectations of children from diverse backgrounds. To the best of my knowledge, no existing studies focus on the link between parental involvement or school resources and educational expectations.

Thirdly, I question the role that resources in the parental home play in defining the educational expectations of both immigrants' children and natives.

The literature agrees on defining human capital as one of the most relevant determinants of educational attainment (Kao and Tienda 1998, Feliciano 2006). Considering the weight of human capital, I will explore if family resources determine educational expectations among immigrants' children. I will introduce some new aspects that are able to capture a family's inclination to guarantee the maximum level of access to educational resources for their child. I assume that living in an encouraging environment can stimulate children to develop academic ambitions.

More specifically research hypotheses are:
HP1. The availability of resources in the school is connected with the individual expectations of the children. Consequently, the more assets offered to students, the higher their expectations will be. Students attending schools with more resources (as measured by proportion of high qualified teachers, higher teacher-student ratio and higher quality of educational resources) are more likely to have higher educational expectations.

HP2: I expect that resources of the school can partially contribute to cover the gap in educational expectations between students who are part of the majority population and minority students.

HP3: Parental involvement in students' education in the school (measured as the direct influence of parents in decision-making about budgeting, instructional content, and assessment practices, and the level of parents' expectations of the school) enhances the educational expectations of their children (HP3a). Moreover, I expect that parental involvement, as an indicator of inclusion in the host society, will reduce differences between natives' children and immigrants' children (HP3b).

HP4: I expect that children whose parents have higher human capital, better socioeconomic status, and more resources to help them (reflected in home possession of cultural and economic assets), have higher educational expectations than those whose parents have less resources in these different domains. I expect this hypothesis holds among all origin groups.

HP5: I expect for our study, that, due to the immigration experience and the adaptation process in the new society, the educational expectations of the children of immigrants are overall lower compared to the expectations of natives (HP5a). In line with recent European literature, I furthermore expect that those of the first generation of immigrants are less ambitious than their second generation peers (HP5b).

### 5.2. Data and method

As reported in the method chapter, in this chapter I use PISA2009 data.
As mentioned in chapter 2.3, the dependent variables have been derived from a question regarding future educational expectations of children (questioned in the Educational Career module of the questionnaire). Children were asked to declare the level of education (isced code) they expect to complete. This information was recoded in two dependent variables as part of my analyses: the expectation to continue education after secondary level and the expectation to reach tertiary level of education for those who want to continue (distinguishing between university and upper secondary education). These two dependent variables are complementary: On the one hand they indicate who expects to continue education or leave the educational system soon; on the other hand it sheds more light on those with prolonged educational ambitions, a group of students regularly overlooked in studies on immigrants' educational performance. It gave better insight into the extent to which the latter are oriented towards academic or vocational careers. The two dependent variables are defined as binary categories; the first dependent includes all students the second only those who state that they expect to continue education after secondary school.

Since I am interested in the educational expectations of the children of immigrants and majority group students in Europe as well as the role played by parental involvement, school resources and its interaction I have access to data from two countries in PISA that meet these requirements. The selection results in a total sample of 32,051 students who are 15 -years-old and who are attending Belgian and Italian schools. The sample from Italy, with 24,302 students, is the largest, while the Belgian sample consists of 7,749 students. For my second dependent variable, which excludes children aiming to reach secondary level of education or lower, the sample is limited to 19,212 students in total.

My data cover both first generation immigrant students ( $5 \%$ of the sample) and second generation students ( $2 \%$ of the total sample). Although first and second generation student are represented in both the countries there are some differences in the size of the immigrant student sample in each of the two countries. Ranging from the highest percentages in Belgium ( $6.9 \%$ second generation and $7.3 \%$ first generation), to the lowest share in Italy ( $1.2 \%$ and $1.4 \%$
for first and second generation respectively). When I select only those children with higher educational expectation in the second part of the chapter, the composition of the sample, in terms of first and second generation, only slightly changes (second generations remain $2 \%$ of the sample and first generations is reduced to $4 \%$ ). The country specific patterns largely remain as described before as does the order between countries in share of the immigrant students.

### 5.2.1. Operationalisation of variables

Detailed information on the characteristics of the sample in terms of composition on the independent variables can be found in Table 5.1.
Migration status. I differentiate the sample of students into five categories, based on parents' and students' birthplace. Children of immigrants include youths living in Italy with at least one foreign-born parent. Groups are: (1) native students (those students who have two parents born in the country), (2) second generation students (those born in the country of residence but with at least one parent born in another country). Then I distinguish first-generation students (those students born outside the country of residence and whose parents were also born in another country into three categories, based on the timing of their arrival into the new country: (3) preschool-age immigrants (those who moved to Italy before they were five years old); (4) child immigrants (those who arrived between the ages of five and nine); (5) and adolescent immigrants (those who arrived at age 10 or older).
School resources. To test the first hypothesis concerning the association between school resources and educational expectations, I introduce three indexes in my analyses. These measure both the quantity and quality of the teaching staff at a school and the quality of the school's educational resources. The "student-teacher ratio" has been obtained by dividing the school size by the total number of teachers. The number of part-time teachers is weighted by 0.5 and the number of full-time teachers is weighted by 1.0. The "proportion of high qualified teachers" (ISCED 5A or more) has been calculated by dividing the number of high qualified teachers by the total number of teachers in the school. "Teacher shortage" has been derived from four items measuring the school principal's perceptions of potential factors that hinder instruction at the school (e.g. lack of mathematics, language or science teachers). More positive values on this index indicate higher
rates of teacher shortage at a school. "Quality of educational resources" has been computed on the basis of seven items that measure the school principal's perceptions of the potential factors hindering instruction at the school (e.g. shortage or inadequacy of computer, internet connectivity or library materials). In this case, since the items were inverted for scaling, more positive values on this index indicate higher levels of educational resources.
Parents' involvement. Referring to parents' involvement at the school, according to recent literature, I include one variable regarding the level of expectations parents have towards the school. Categories refer to largely absent pressure, pressure by a minority of parents, and constant pressure by many of the parents. Moreover, I include measures of parental groups influence on budget, instructional context, and assessment.
Family resources. To capture the family possessions that are supposed to stimulate children expectations, I introduce two indexes: cultural possessions, home educational resources, and home possessions. These indices are based on a battery of questions extracted from the student questions regarding the presence in the house of material or cultural assets. Cultural possessions (measured as having at home literature, books of poetry and works of art) and home educational (measuring the existence at home of e.g. a quiet place to study, a computer and technical books) indices were scaled in a single step, but the item parameters were allowed to vary by country.
Individual and parental characteristics. Parental human capital has been measured through two international standard measures: ISEI (international socioeconomic index of occupational status) and ISCED (OECD, 1999) scales. I included the highest occupational status of parents (HISEI), which corresponds to the higher ISEI score of either parent or to the only available parent's ISEI score. Parental education is classified using taking the highest educational level of parents (HISCED), which corresponds to the higher ISCED level of either parent. For the purpose of my study I recoded the original six categories into four larger groups: lower secondary or lower, technical secondary, general secondary and tertiary education.
Control variables. Demographic characteristics (sex and country of residence), children of mixed couples (i.e., only one parent born in the residence country) and an indicator of the orientation of the school attended (vocational or general) have been included in all of the models.

Tabel 5.1 Description of countries by sample definitions, mean and SD

|  | Expectations to go on after secondary level |  |  |  |  | Expectations to attend university |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Belgium |  |  | Italy |  | Belgium |  | Italy |  |
|  | n | 7,749 |  | 24,302 |  | 5,491 |  | 13,721 |  |
|  | Range | Mean | SD | Mean | SD | Mean | SD | Mean | SD |
| Migration status | 1-5 | 1.32 | 0.009 | 1.14 | 0.004 | 1.26 | 0.10 | 1.11 | 0.005 |
| School resources |  |  |  |  |  |  |  |  |  |
| Student-teacher ratio | 0.56-26.5 | 9.19 | 2.17 | 9.01 | 2.83 | 9.43 | 2.47 | 9.76 | 2.84 |
| Quality of educational resources | -3.38-1.92 | 0.12 | 0.97 | -0.01 | 0.90 | 0.18 | 0.97 | 0.00 | 0.91 |
| Teacher shortage | -1.02-3.34 | 0.51 | 0.92 | 0.18 | 0.83 | 0.41 | 0.91 | 0.18 | 0.83 |
| Proportion of high qualified teachers | 0/1 | 0.37 | 0.17 | 0.77 | 0.30 | 0.40 | 0.17 | 0.80 | 0.31 |
| Parents involvement in school |  |  |  |  |  |  |  |  |  |
| Parental expectations towards school | 1-3 | 2.44 | 0.68 | 2.15 | 0.63 | 2.39 | 0.72 | 2.03 | 0.65 |
| Parents groups influence budget | 0/1 | 0.09 | 0.29 | 0.15 | 0.36 | 0.11 | 0.31 | 0.17 | 0.38 |
| Parents groups influence instructional content | 0/1 | 0.10 | 0.31 | 0.16 | 0.37 | 0.12 | 0.32 | 0.16 | 0.37 |
| Parents groups influence assessment | $0 / 1$ | 0.23 | 0.42 | 0.10 | 0.31 | 0.24 | 0.43 | 0.11 | 0.32 |
| Home resources |  |  |  |  |  |  |  |  |  |
| Cultural possession | -1.61-1.35 | -0.25 | 0.93 | -0.06 | 0.83 | -0.15 | 0.92 | 0.14 | 0.77 |
| Home educational resources | -4.31-1.33 | 0.05 | 0.86 | 0.07 | 0.89 | 0.14 | 0.84 | 0.22 | 0.84 |
| Individual and parental characteristics |  |  |  |  |  |  |  |  |  |
| Socioeconomic status | 16-90 | 50.35 | 17.13 | 46.69 | 16.21 | 52.57 | 17.17 | 50.57 | 16.73 |
| Parents' education level | 1-4 | 3.01 | 0.94 | 2.69 | 1.08 | 3.08 | 0.93 | 2.93 | 1.00 |
| Control variables |  |  |  |  |  |  |  |  |  |
| Math score | 81.25-776.77 | 519.56 | 99.00 | 488.93 | 85.82 | 543.52 | 93.76 | 512.98 | 81.47 |
| Female | 0/1 | 0.49 | 0.49 | 0.48 | 0.50 | 0.52 | 0.50 | 0.54 | 0.50 |
| Mixedcouple | 0/1 | 0.12 | 0.33 | 0.08 | 0.26 | 0.12 | 0.32 | 0.07 | 0.27 |
| Isced General orientation | 0/1 | 0.44 | 0.49 | 0.57 | 0.49 | 0.39 | 0.49 | 0.38 | 0.48 |

*To analyze the pupils who expect to obtain upper secondary or tertiary education, we exclude from the sample those children who expect to stop at secondary level

### 5.2.2. Methods

The methods have been described in Chapter 2, here I provide only a short description of the models that will be implemented during this chapter. I include the two dependent variables in separate multilevel logistic regression models with random intercept. Explanatory variables are stepwise included in the regression models. I first introduce variable able to capture parental human capital, then add information on the household possession in terms of cultural possession and home educational resources. Lastly, I focus on school resources and on parent's involvement in school. This allows for studying the impact of the different aspects considered and, moreover, I can check their influence into the first and second generation groups.

To control for selection bias and endogeneity regarding the presence of high ambitioned pupils in schools with higher level of resources or high level of involvement in the schools, I considered two precautions. First, I only used information about school and parental involvement coming from the school questionnaire, hence declared by the schools' directors and not by parents. Second, to test the robustness of my results, I performed the same analyses on a selected sample. I defined this sample using one question (from the school questionnaire) regarding the availability of competing school in the area. I selected only schools where there are no competing schools in the area, hence students are not selectively allocated, and I performed our analyses again. The results confirm my analyses (details in appendix A).

PISA2009 do not provide any information on previous attainment. Without this information, it is not possible to control for the impact of previous educational performances on the educational expectations. However, PISA 2009 offers a measure of students' ability that can be derived from the five plausible values of student performance on math subject. Following OECD instruction, I used the five plausible values, final sampling weights, and 80 replicate sampling weights to define an unbiased and continuous measure of student proficiency from discrete exam scores, and accounting for the sampling structure of the survey. Afterwards, I ran all my models including this information (details in appendix B and C). Results obtained including this variable confirm my results concerning the main covariates included in my analyses. Controlling for a measure of ability, the role of migration status is amplified and immigrant students over perform natives.

Moreover, the role of gender is also enhanced, with females having extremely higher expectations than males.

In this case, the role of school characteristics and parents' involvement in school are also determinants for expectations to continue after secondary level. Differences between Belgium and Italy are confirmed. In the case of expectations of attending university, family background plays a leading role. Including a measure of students' ability and applying a necessary control on the validity of my analyses do not change my results.

### 5.3. Results

To test my hypotheses, I performed multilevel logistic regression models with random intercept both for the Italian and the Belgian samples. I present models able to disentangle both the role of school resources and parents' involvement in school and the role of individual and family characteristics. Models essentially demonstrate that the national context is determinant in defining the role of different variables concerning home and school resources and parental involvement. The proportion of highly qualified teachers in the schools is decisive. At the core of our analysis was to study whether parents' involvement in school is determinant to define educational expectations. Our indicators of parental expectations on schools and parent groups influence in the allocation of resources. The analyses show that both elements have an effective impact on expectations. A child attending a school where there is constant pressure by many parents on educational expectations is clearly more motivated to continue after secondary school than a child attending a school where parental expectations are largely absent, regardless of his county of residence.

Looking at the findings of our analyses in more depth, Table 5.2 shows the models performed to analyse expectation to continue after secondary school using Italian and Belgian data. In models 1 and 2, I tested hypotheses 4 and 5 a and b regarding human capital, socioeconomic characteristics, home possession and migration status. Models show that, with the exception of being the child of a mixed couple, which has no significance, all the other covariates are associated with educational expectations. Second generations living in Italy have lower educational expectations than natives, but differences disappear when measures of
the involvement of parents in the school are included. Confirming recent literature (Hypothesis 5b), children who arrived in Italy at school age have higher educational expectations than natives. In Belgium, on the contrary, this group of children who arrived to the host country between 5 and 10 years is the only one that demonstrates lower expectations than natives. While the role of parents' educational level is clear for the Italian case, in Belgium there is no association between the academic career of parents and children's expectations. The kind of school currently attended (if general or vocational), parents' socioeconomic status and sex are all clearly relevant. In both countries, female students are more ambitious than males, and students with lower socioeconomic status parents are less ambitious. Attending vocational school is a clear indicator, those being in this track clearly expect to stop education at secondary level or lower.

As I expected (Hp 4), in both Italy and Belgium cultural and educational resources count more positively associated to educational expectations: families guaranteeing home resources have children with high educational ambitions.

Models 3 and 4 add the indicators of key interest for my study and for answering Hypothesis 1 to 3 b regarding school resources and parental involvement in the school. School resources are determinant to define educational expectations and the proportion of high qualified teachers is probably the key variable to determine the success of the school in terms of enhancing educational expectations in both the countries. If in the Italian case the student- teacher ratio also matters, for Belgium, the quality of educational resources and the teacher shortage are associated with the expectations to go on after secondary education.

If many of the parents in the school are involved in expressing their expectations, the chance of a child expecting to continue after completing the secondary level is higher. Moreover, it is helpful to have groups of parents involved in influencing the school's budget in Belgium and educational content in both countries, but their impact is higher in Italy if they are involved in influencing assessment.

Starting from the null models, I calculated the intraclass correlation coefficient (ICC) to estimate the proportion of variance explained by the school context. The ICC is 0.35 for the analysis of expectations in Italy and 0.30 for the estimates of Belgium. The ICC represents the proportion of variability of educational expectations explained by different schools. The results are significantly different from zero, indicating that schools influence expectations at the individual level, especially in Italy. The null models indicate the extent to which variation in educational expectation is captured by variation in educational
ambitions across schools. My results indicate that school context matters. Between 35 and 30 percent of the variation in educational expectations of children may be attributed to the schools they attend.

Table 5.2: Multilevel Logistic random intercept models of educational expectation to continue after secondary school.

|  | Italy |  |  |  | Belgium |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Model 1 | Model 2 | Model 3 | Model 4 | Model 1 | Model 2 | Model 3 | Model 4 |
| Migration status Ref. Natives |  |  |  |  |  |  |  |  |
| Second Generations | 0.89* | 0.92* | 0.92* | 0.92 | 0.96 | 0.96 | 0.96 | 0.95 |
|  | (0.063) | (0.067) | (0.066) | (0.066) | (0.059) | (0.059) | (0.058) | (0.058) |
| Pre school | 0.93 | 0.96 | 0.96 | 0.97 | 0.94 | 0.93 | 0.94 | 0.94 |
|  | (0.052) | (0.054) | (0.054) | (0.054) | (0.063) | (0.063) | (0.063) | (0.063) |
| Child Immigrants | 1.11* | 1.15*** | 1.15*** | 1.15*** | 0.81*** | 0.81*** | 0.81*** | 0.81*** |
|  | (0.049) | (0.051) | (0.051) | (0.051) | (0.054) | (0.054) | (0.053) | (0.053) |
| Adolescent immigrants | 1.02 | 1.07 | 1.07 | 1.07* | 0.94 | 0.95 | 0.96 | 0.96 |
|  | (0.039) | (0.041) | (0.040) | (0.041) | (0.050) | (0.051) | (0.051) | (0.051) |
| Female | 1.34*** | 1.31*** | 1.31*** | 1.31*** | 1.50*** | 1.47*** | 1.44*** | 1.44*** |
|  | (0.046) | (0.045) | (0.045) | (0.045) | (0.094) | (0.092) | (0.090) | (0.090) |
| Ses | 1.01*** | 1.01*** | 1.01*** | 1.01*** | 1.02*** | 1.01*** | 1.01*** | 1.01*** |
|  | (0.001) | (0.001) | (0.001) | (0.001) | (0.002) | (0.002) | (0.002) | (0.002) |
| Parents' education level Ref. Tertiary education |  |  |  |  |  |  |  |  |
| Less than secondary | 0.54*** | 0.60*** | 0.60*** | 0.60*** | 0.79*** | 0.84 | 0.85 | 0.86 |
|  | (0.029) | (0.032) | (0.032) | (0.032) | (0.105) | (0.113) | (0.113) | (0.114) |
| Vocational oriented | 0.90*** | 0.91*** | 0.91*** | 0.91*** | 1.03 | 1.04 | 1.05 | 1.05 |
|  | (0.025) | (0.025) | (0.025) | (0.025) | (0.039) | (0.040) | (0.040) | (0.040) |
| Secondary teoretically based | 0.97* | 0.97* | 0.97* | 0.97* | 0.97 | 0.98 | 0.98 | 0.98 |
|  | (0.014) | (0.014) | (0.014) | (0.014) | (0.024) | (0.025) | (0.025) | (0.025) |
| Mixedcouple | 0.96 | 0.96 | 0.99 | 0.99 | 0.91 | 0.91 | 0.91 | 0.91 |
|  | (0.058) | (0.059) | (0.059) | (0.059) | (0.080) | (0.080) | (0.080) | (0.080) |
| Isced orientation Ref. general |  |  |  |  |  |  |  |  |
| Vocational oriented | 0.39*** | 0.42*** | 0.46*** | 0.48*** | 0.60*** | 0.62*** | 0.66*** | 0.66*** |
|  | (0.011) | (0.011) | (0.015) | (0.015) | (0.025) | (0.026) | (0.029) | (0.029) |
| Home resources |  |  |  |  |  |  |  |  |
| Cultural possession |  | 1.29*** | 1.29*** | 1.28*** |  | 1.19*** | 1.18*** | 1.18*** |
|  |  | (0.027) | (0.027) | (0.027) |  | (0.043) | (0.043) | (0.043) |
| Home educational resources |  | 1.22*** | 1.22*** | 1.22*** |  | 1.20*** | 1.19*** | 1.19*** |
|  |  | (0.023) | (0.023) | (0.023) |  | (0.044) | (0.044) | (0.044) |
| School resources |  |  |  |  |  |  |  |  |
| Student-teacher ratio |  |  | 1.05*** | 1.05*** |  |  | 0.97 | 0.96 |
|  |  |  | (0.011) | (0.011) |  |  | (0.025) | (0.024) |
| Quality of educational resources |  |  | 1.01 | 1.01 |  |  | 1.25*** | 1.28*** |
|  |  |  | (0.028) | (0.028) |  |  | (0.073) | (0.074) |
| Teacher shortage |  |  | 1.00 | 1.00 |  |  | .83** | .86* |


| Proportion of highqualified teachers |  |  | $\begin{array}{r} (0.031) \\ 1.41^{* * *} \end{array}$ | (0.030) |  |  |  | (0.054) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | 1.41*** |  |  | 7.10** | 6.22*** |
|  |  |  | (0.122) | (0.120) |  |  | (2.735) | (2.349) |
| Parents involvement in school |  |  |  |  |  |  |  |  |
| Parental expectations towards school Ref. |  |  |  |  |  |  |  |  |
| Largely absent |  |  |  |  |  |  |  |  |
| Constant pressure by many parents |  |  |  | 1.54*** |  |  |  | 1.69** |
|  |  |  |  | (0.146) |  |  |  | (0.322) |
| Pressure by minority of parents |  |  |  | 1.063* |  |  |  | 1.02 |
|  |  |  |  | (0.030) |  |  |  | (0.062) |
| Parents groups influence budget |  |  |  | 1.12 |  |  |  | 1.45* |
|  |  |  |  | (0.078) |  |  |  | (0.271) |
| Parents groups influence instructional content |  |  |  | 1.10 |  |  |  | 1.23 |
|  |  |  |  | (0.079) |  |  |  | (0.238) |
| Parents groups influence assessment |  |  |  | 1.29*** |  |  |  | 1.16 |
|  |  |  |  | (0.109) |  |  |  | (0.162) |
| II level variance | .408(.033) | .356(.030) | .333(.029) | .307(.027) | .819(.106) | .732(.097) | .513(.074) | .463(.069) |
| Number of observations | 24,302 | 24,302 | 24,302 | 24,302 | 7,749 | 7,749 | 7,749 | 7,749 |
| Number of groups | 888 | 888 | 888 | 888 | 261 | 261 | 261 | 261 |
| LR test | 698.19*** | 563.21*** | 513.99*** | 461.42*** | 509.92*** | 441.10*** | 284.69*** | 236.97*** |
| Notes: $\quad * * *<0.01 \quad * *<0.05$ | *<0.1 | nalyses | are | ghted | and | ented | S | ratio |

Table 5.3 shows the models concerning the expectations to attend university for those children who express they wanted to continue with their education after completing secondary school.

The ratios clearly show that in this case, while family background and family resources maintain their determinacy (and have similar effects as reported before), some aspects regarding school resources and parental involvement are less influential in shaping educational expectations.

Differences between the two countries appear evident, if I look at differences between natives and immigrants. While in Belgium students of immigrant origin, both second and first generations, often expect to go to university more often than upper secondary education, and the ratios increase once I control for school characteristics, in Italy there is no difference between Italians and students with a migration background. I potentially have to interpret this as related to the fact that these immigrant students are part of an extremely selected group. Immigrants' children who expect to attend more than the secondary level of schooling can be prone to invest all their resources to reach the maximum level of education. Furthermore, students with migration background might have less access to information about the chances and job opportunities after having completed upper secondary courses in the host country.

Female students are again found to be more ambitious than men in Italy, while they are not in Belgium. The children of highly educated parents also have the highest educational expectations. The relevance of parents' qualification only become relevant in Belgium in this case, hence it is only associated with the expectations to attend university, not with expectations to go on after secondary school. Children who attend general schools are more prone to declare their expectation to go to university.

Home resources maintain their relevance unchanged. If I look at school resources, the only variable that maintains its significance in Italy is the studentteacher ratio, while the proportion of highqualified teachers and student/ teacher ratios are still relevant in the Belgian case. Furthermore, in this study, when parents stimulate the school environment by adding pressure in terms of educational expectations, the students are more encouraged to enhance their expectations, at least in the Italian case, where parent groups also influence assessment is still relevant. Parents' involvement in Belgian schools is not associated with the expectations of reaching tertiary education instead of attending upper secondary courses.

Table 5.3: Multilevel logistic random intercept regression models for the expectation to reach the tertiary level of education
Notes: $* * *<0.01 * *<0.05 *<0.1$ Analyses are weighted and presented as odds ratios.

|  | Italy |  |  | Belgium |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Model 1 | Model 2 | Model 3 | Model 4 | Model 1 | Model 2 | Model 3 | Model 4 |
| Migration status Ref. Natives |  |  |  |  |  |  |  |  |
| Second Generations | 0.99 | 1.04 | 1.03 | 1.03 | 1.16** | 1.22*** | 1.21*** | 1.21*** |
|  | (0.104) | (0.110) | (0.109) | (0.109) | (0.089) | (0.094) | (0.094) | (0.093) |
| Pre school | 1.08 | 1.12 | 1.12 | 1.12 | 1.32*** | 1.32*** | 1.33*** | 1.33*** |
|  | (0.095) | (0.099) | (0.098) | (0.098) | (0.129) | (0.131) | (0.132) | (0.132) |
| Child Immigrants | 0.98 | 1.00 | 1.00 | 1.00 | 1.40 *** | 1.41*** | 1.42*** | 1.42*** |
|  | (0.060) | (0.063) | (0.062) | (0.062) | (0.150) | (0.151) | (0.152) | (0.152) |
| Adolescent immigrants | 0.97 | 1.01 | 1.00 | 1.00 | 1.25*** | 1.31*** | 1.34*** | 1.33*** |
|  | (0.054) | (0.057) | (0.056) | (0.056) | (0.093) | (0.098) | (0.101) | (0.100) |
| Female | 1.17*** | 1.15*** | 1.15*** | 1.15*** | 0.88** | 0.84** | 0.83*** | 0.83*** |
|  | (0.053) | (0.052) | (0.052) | (0.052) | (0.061) | (0.059) | (0.059) | (0.059) |
| Ses | 1.01*** | 1.01*** | 1.01*** | 1.00*** | 1.01*** | 1.01*** | 1.01*** | 1.01*** |
|  | (0.002) | (0.002) | (0.002) | (0.002) | (0.002) | (0.003) | (0.003) | (0.003) |
| Parents' education level Ref. Tertiary education |  |  |  |  |  |  |  |  |
| Less than secondary | 0.74*** | 0.80*** | 0.80*** | 0.80*** | 0.53*** | 0.62*** | 0.63*** | 0.64*** |
|  | (0.058) | (0.063) | (0.063) | (0.063) | (0.104) | (0.122) | (0.124) | (0.126) |
| Vocational oriented | 0.84*** | 0.85*** | 0.85*** | 0.85*** | 0.66*** | 0.68*** | 0.68*** | 0.69*** |
|  | (0.032) | (0.032) | (0.032) | (0.032) | (0.028) | (0.029) | (0.029) | (0.030) |
| Secondary teoretically based | 0.98 | 0.99 | 0.99 | 0.99 | 0.80*** | 0.82*** | 0.82*** | 0.82*** |
|  | (0.019) | (0.019) | (0.019) | (0.019) | (0.025) | (0.026) | (0.026) | (0.026) |
| Mixedcouple | 0.99 | 1.02 | 1.02 | 1.02 | 1.30** | 1.35*** | 1.35*** | 1.36*** |
|  | (0.082) | (0.085) | (0.085) | (0.085) | (0.142) | (0.148) | (0.149) | (0.150) |
| Isced orientation Ref. General |  |  |  |  |  |  |  |  |
| Vocational oriented | 0.39*** | 0.41*** | 0.41*** | 0.46*** | 0.31*** | 0.31*** | 0.31*** | 0.35*** |
|  | (0.012) | (0.012) | (0.015) | (0.016) | (0.014) | (0.014) | (0.018) | (0.018) |
| Home resources |  |  |  |  |  |  |  |  |
| Cultural possession |  | 1.22*** | 1.22*** | 1.22*** |  | 1.32*** | 1.31*** | 1.31*** |
|  |  | (0.036) | (0.036) | (0.036) |  | (0.055) | (0.055) | (0.055) |
| Home educational resources |  | 1.18*** | 1.18*** | 1.18*** |  | 1.22*** | 1.22*** | 1.22*** |
|  |  | (0.031) | (0.031) | (0.031) |  | (0.058) | (0.058) | (0.058) |
| School resources |  |  |  |  |  |  |  |  |
| Student-teacher ratio |  |  | 1.06*** | 1.05*** |  |  | 1.05*** | 1.05*** |
|  |  |  | (0.013) | (0.013) |  |  | (0.022) | (0.022) |
| Quality of educational resources |  |  | 1.05 | 1.05 |  |  | 0.99 | 1.000 |
|  |  |  | (0.031) | (0.031) |  |  | (0.047) | (0.048) |


| Teacher shortage |  | 1.06* | 1.06* |  |  | 0.99 | 1.000 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | (0.035) | (0.035) |  |  | (0.049) | (0.050) |
| Proportion of highqualified teachers |  | 1.10 | 1.09 |  |  | 1.90** | 1.97** |
|  |  |  |  |  |  | (0.608) | (0.631) |
| Parents involvement in school |  |  |  |  |  |  |  |
| Parental expectations towards school Ref. Largely absent |  |  |  |  |  |  |  |
| Constant pressure by many parents |  |  | 1.18** |  |  |  | 1.21 |
|  |  |  | (0.113) |  |  |  | (0.171) |
| Pressure by minority of parents |  |  | 1.05 |  |  |  | 0.97 |
|  |  |  | (0.033) |  |  |  | (0.048) |
| Parents groups influence budget |  |  | 0.86* |  |  |  | 1.00 |
|  |  |  | (0.065) |  |  |  | (0.142) |
| Parents groups influence instructional content |  |  | 1.10* |  |  |  | 0.93 |
|  |  |  | (0.080) |  |  |  | (0.143) |
| Parents groups influence assessment |  |  | 1.29*** |  |  |  | 0.98 |
|  |  |  | (0.076) |  |  |  | (0.112) |
| II level variance .238(.032) | .225(.031) | .201(.029) | .194(.029) | .169(.043) | .154(.042) | .148(.041) | .143(.040) |
| Number of observations 13,721 | 13,721 | 13,721 | 13,721 | 5,491 | 5,491 | 5,491 | 5,491 |
| Number of groups 863 | 863 | 863 | 863 | 259 | 259 | 259 | 259 |
| LR test 125.62*** | $115.00 * * *$ | 95.33*** | 89.46*** | 35.73*** | 29.81*** | 26.74*** | 25.82*** |

### 5.4. Conclusions

In this chapter I aimed to shed more light on the role of schools, parents and their interaction in shaping education expectations of students of native and immigrant origin. I did so by using unique data from PISA 2009 that allows for an assessment of each of these factors in two different European countries: Belgium and Italy. I looked at two different but linked expectations: whether or not to continue education after secondary school and the expectation to continue to university for those who expect to prolong their educational career after secondary school.

Considering the expectations to continue on after secondary education, it is evident from my results that students attending schools with more resources are more likely to have higher educational expectations. My second hypothesis is not confirmed: the resources of the school do not explain the gap between majority and minority students in terms of expectations. The third hypothesis concerned the role of parental involvement in shaping educational expectations: model outputs confirm that parental involvement in students' education at the school enhances the educational expectations of children. However, as before, parental involvement does not explain all of the differences between natives and immigrants' children

Furthermore I noticed some differences between the two countries regarding the migration status of the children. While in Italy the second generation have lower educational expectations than the first generation and are more likely to consider ending their educational career at the end of secondary school, in Belgium the second generation demonstrates the same patterns as found for the natives, while first generation immigrants have lower educational expectations. Whereas the findings for Italy suggest a sign of segmented assimilation, the second one is a clear example of strightline assimilation. These different patterns could be due to the fact that while Italy is a country of recent migration, Belgium is a country of old migration, more able to deal with the presence of immigrant students within schools. Students in this case increase their level of integration according with their stay in the educational system. Finally, the possession of home resources is associated with enhanced educational expectations without diminishing the differences between immigrants' children and natives. New measures of home resources, connected with the possibility of
the family to guarantee to the student a stimulating cultural environment, have to be considered in future studies about the role of family in shaping educational performances.
The analyses on the educational expectations of reaching tertiary-level education show that the family environment plays a key role (in terms of the characteristics and the resources of the family), but school resources and parental involvement in the school are less important for these expectations. Furthermore, students of first generation immigrant origin who expect to complete tertiary-level education have higher expectations (i.e., to go to university) than native students do. In conclusion, the interaction between parents and the school is primarily relevant for preventing students from leaving the educational system at an early stage, and national context is very important to understand the mechanisms behind educational expectations.

My analyses emphasize territorial differences. My findings brought attention to the importance of family background in Italy whereas the opposite was true in Belgium, where the relevance of school resources and school involvement are more important. Moreover, I highlighted the importance of parental involvement in the school and noted that while it is a crucial determinant for immigrants deciding to attain more than a secondary education, it does not reveal its force for the selected group of immigrants' children who already decided to continue their education and attain the tertiary level.

My chapter decisively draws attention to the need to focus on the relevance of policies concerning parental involvement in the school in order to enhance the educational expectations of students with native and immigrant background. Policy implications will be developed in the final chapter. Nevertheless, it seems appropriate to say in advance that avoiding linguistic barriers to informing immigrants about school daily life should be a starting point for policies aimed at increasing immigrants' involvement in the schools.

## Chapter 6 <br> The role of school context on the educational expectations and aspirations of children of immigrants and natives in Italy

### 6.1 Introduction: motivation and background of the study

The growing presence of children with immigrant backgrounds in the Italian school system has spurred social scientists to investigate these children's integration experiences. Data from Italy's Ministry of Education indicate that students with non-Italian citizenship have lower educational attainment and poorer academic achievement than their Italian counterparts, and they are less likely to pursue university education. Official statistics show that 43 percent of students with non-Italian citizenship attend vocational school, compared with 20.3 percent of the total population (Ministry of Education, 2009). Checchi (2003) claims that the pursuit of vocational education comes at the expense of university education and represents an obstacle to social mobility. In light of disparities in post-secondary enrollment between immigrant and Italian youths, I seek to understand how the educational short-term expectations and long-term aspirations of children of immigrants are formed.

Moreover, since the number of immigrant students in the school system has increased (in the 2008-2009 school year, there were more than 2,000, a $17 \%$ increase compared to the previous school year), the Italian government has recently introduced a policy to deal with necessary changes to the daily organization of school-life. With the declared aim of providing a social environment that can prevent situations of hardship and difficulties arising from the new contexts of life and study, and trying to create the necessary sharing of rules of coexistence and social participation, the Ministry of Education, has adopted a new measure in 2010: the number of non-Italian pupils in each class must not exceed $30 \%$ of total enrollment. The critical issues that the Minister aims to face are: "the incidence of failure, rejection and delay, which characterizes the years of schooling of pupils from a immigrant background - the knowledge of Italian, sometimes absent or mastered at vastly different levels of competence, the possession of the new language most useful to register as a spontaneous communication than as a daily tool for the study" (from the official letter sent by the Ministry to the schools). The trouble, continues the letter, is that these problems not only affect foreign students, but inevitably reverberate with the
whole class learning process in which they are nested. Unfortunately, since the absence in the used data of information about the number of foreign students in each classroom, I cannot directly face the issue of the $30 \%$ threshold introduced by the measure of the Italian Minister of Education. However, I will answer to one relevant research questions: is it true that a high presence of immigrants' children in schools decreases the scholastic performances of natives? The aim of the second part of this chapter is to answer this question.

This chapter develops as follows.
In the first part I will focus my attention on the children of immigrants, propose my research questions, and describe the data and empirical research strategy used for this study. I will examine whether different expectations and aspirations of children of immigrants' are associated with generation status, country of origin, and family background. Furthermore, I will consider whether, and in which ways educational goals are influenced by peers and the school social context, which I represent based on the educational aspirations of Italian students attending the same school as respondents.

In the second part I will focus my attention on natives. After proposing my research questions and briefly describing the data and empirical method, I will analyze to what extent the perceived relevance of friendship ties influence educational expectations and aspirations. In particular, I am interested in evaluating whether the individual scholastic goals of Italian children are affected by the presence of a growing number of interethnic friendship ties in the school. In the last part of the chapter I will introduce the key variable concerning the proportion of foreigners present in the schools in my models, and I will test if attending a school with a high concentration of immigrants' children reduces the aspirations of natives. Before discussing my results, I will propose a selection where I deal with the issue of the random allocation of students into schools with respect to immigrant background.
6.2.1. The role of school context in defining the educational expectations and aspirations of immigrants' children living in Italy

In this session, I will test the following research hypotheses:
HP1: I hypothesize that in Italy, as shown for the United States (Portes and Rumbaut 2001; Bohon, Johnson, and Gorman 2006; Louie 2006), the educational
expectations and aspirations of children the of immigrants will differ according to their country of origin.

HP2: I expect that valuing friendships and meeting friends are key indicators of social acceptance that should be positively associated with educational expectations. More specifically, I examine how students' reported friendship ties are associated with both their short-term educational expectations and long-term aspirations.

HP3: I hypothesize that attending a school where most of the Italian students expect to attend high school is positively associated with the educational expectations and aspirations of children with immigrant parents.

### 6.2.2. Data and methods: Dependent variables

I use the Italian Second Generation Survey (ITAGEN2) for my analyses. Consistent with prior studies, I consider two indicators of educational ambitions or attitudes; namely students' self-reported expectations to attend high-schools (licei) and to pursue university training (see Sewell and Shah 1967; Woelfel and Haller 1971; Checchi and Flabbi 2006 for Italy). Both are measured as indicator variables. Students were asked about their desire to attend upper secondary school (and more precisely which kind of secondary school, distinguishing between high school and technical or vocational school) and also whether they wished to attend a university. I use the former to designate short-term expectations and the latter to represent long-term aspirations.

Both expectation measures are binary indicators; therefore, I use logistic regression models to evaluate the association between nativity status and educational expectations. I estimate separate models for short- and long-term ambitions. The most recent report of the national institute in charge of evaluating the Italian educational system (INVALSI-SNL 2009-2010) indicates that part of the national variance in ability scores is due to school-level differences. To discern the impact of the school social context on the ambitions of the children of immigrants, I estimate multilevel models, which permit us to take into consideration heterogeneity within, as well as between, schools. Specifically, I address whether schools with a high percentage of Italian students who aim to attend high school are associated with the short- and long-term ambitions of children of immigrants.

### 6.2.3. Independent variables

My hypotheses are organized around two constructs: migration status and country of origin; and school context, which I represent based on the nativity composition of the school. I describe each construct in operational terms below. Because my focus is not citizenship, but rather the integration challenges which youths with migration backgrounds face, I characterize generation status based on birthplace and age at migration.

Migration status is defined based on parents' and students' birthplace. Italian-born students with two Italian parents are classified as natives and serve as the reference group in the statistical analyses. Children of immigrants include youths living in Italy with at least one foreign-born parent. I distinguish among four groups of youths with immigrant backgrounds: second generation (those born in Italy and having at least one foreign-born parent); preschool-age immigrants (those who moved to Italy before they were five years old); child immigrants (those who arrived between the ages of five and nine); and adolescent immigrants (those who arrived at age 10 or older) (Glick and White 2003). Second-generation children are usually not Italian citizens unless they have a parent with Italian citizenship. Italian law allows children of immigrants born in Italy to obtain Italian citizenship when they reach age 18.

In addition, I designate the national origins of youths with migration backgrounds, using information about their parents' country of origin. If both parents were foreign-born but their countries of origin did not coincide, I used the mother's origin. My sample sizes permit us to distinguish several countries in the non-native sample, including: Albania (13.0 percent), China (8.9 percent), Morocco ( 7.5 percent), Romania ( 9.0 percent), India ( 5.2 percent), Macedonia ( 4.5 percent), the Philippines ( 4.1 percent), and Tunisia ( 2.8 percent). Other origins were aggregated into regional categories: Eastern Europe and the Balkans (10 percent); South America (11.6 percent); United States, Japan, and other European countries ( 8.1 percent); Other Africa ( 8.8 percent), and Other Asia ( 6.3 percent).

Friendships are operationalized using items that represent social interactions with schoolmates; namely the frequency of contacts between Italian and immigrant friends. I also consider students' perception of the value of friendship ties. Since the variables differ, a factor analysis was not developed.

Thus, every variable is considered representative of one of the aspects concerning the relevance and presence of friends for capturing social interaction (Table 6.1).

Table 6.1. List of variables used to measure friendship and social interaction

| Question | Codification | Possible answers |
| :--- | :--- | :--- |
| Relevance of friends | $0 / 1$ | Not relevant/ Relevant |
| Having Immigrant friends | $0 / 1$ | yes/no |
| Having more Italian or foreign friends | $1-3$ | Equal (ref.) more Italians/ more foreigners |
| Meeting with Italian friends | $0 / 1$ | Rarely-never/ often-always |
| Meeting with immigrant friends | $0 / 1$ | Rarely-never/ often-always |

School context is operationalized using the composition of the student body. Specifically, I compute the average educational expectations of the Italian students attending each school. For sampling reasons and owing to the residential and school segregation of immigrant students, twenty-eight schools had fewer than ten Italian students in eighth grade; I exclude these cases from the analysis. Importantly, these schools do not appear to be different in compositional nature from the schools that remain in the sample. Using this measure, I identified a threshold that is associated with an increase in children of immigrants' ambitions both in the short and long terms. This binary variable, calculated at school level, is used in the multilevel models.

My analyses include several control variables that other studies show are associated with both the outcome and predictor variables of interest. These include family background, which I capture with measures of parental education and socioeconomic status, and other demographic and geographic attributes. Parents' education is measured using the highest education level obtained by either parent, and recoded in four categories based on their age at finishing education: high (studied beyond age 20), medium (studied until ages 15 to 19), low (left school before age 15), and unknown. Because this information is based on student reports, nearly one-quarter of responses are missing.

A standardized measure of socioeconomic status (ISEI scale) has been used to determine the socioeconomic condition of each student. If both parents worked, I used the ISEI scale for the highest status occupation of either parent. Unlike education, this item has less missing data (only 8 percent). Unfortunately, the survey lacks information about whether parents are self-employed or not. Other measures included in the analysis represent students' demographic characteristics: gender, number of siblings, children of mixed couples (i.e., only
one parent born in Italy), and area of residence. The geographical area of residence was coded by dividing Italy into three areas. Northern regions are Lombardy and Veneto; central regions include Emilia-Romagna, Tuscany, Marches, and Lazio; and southern regions are Campania, Apulia, Calabria, and Sicily. I used these distinctions because previous empirical studies demonstrate differences in the educational performance of children living in these three areas of Italy. I also included the number of siblings because it represents a measure of the resources available in each family that can be allocated to education.

### 6.2.4. Country of origin variation in educational goals

Italian immigrants are very culturally diverse, indicated by their many countries of origin. As the descriptive statistics in Table 6.2 reveal, the highest educational ambitions correspond to youths whose parents come from developed countries (the countries of Western Europe, the United States, and Japan). Among these youths, more than half report plans to enroll in licei, and almost four in five indicate they expect to attain university training. Children whose parents come from Morocco have the lowest short-term educational expectations, as only 14 percent report that they intend to pursue high school (rather than technical or vocational training); but surprisingly, nearly one in four claims to want to attend college. Children with an ethnic background from Macedonia, China, and India also report little desire to attend high school. On the other hand, immigrant children from developed countries (Western European countries, the United States, and Japan) have higher educational expectations and aspirations than natives.

Table 6.2. Upper secondary school and university expectations by country of origin (data: ITAGEN)

|  | Short-term educational <br> expectations | Long-term educational <br> aspirations |  |
| :--- | :--- | :--- | ---: |
|  | High expectations (\%) | High aspirations (\%) <br> University | N |
|  | Licei | 59.8 | 54 |
| Developed countries | 51.4 | 43.6 | 89 |
| Philippines | 40.4 | 46.9 | 193 |
| Other African countries | 39.6 | 45.0 | 185 |
| Romania | 33.9 | 54.6 | 196 |
| South America | 31.9 | 39.4 | 146 |
| Other Asian countries | 29.2 | 46.6 | 70 |
| Tunisia | 26.5 | 37.4 | 352 |
| Albania | 24.3 | 37.6 | 187 |
| East and Balkans | 23.8 | 25.3 | 115 |
| India | 17.7 | 22.0 | 235 |
| China | 17.2 | 19.6 | 105 |
| Macedonia | 14.6 | 25.0 | 195 |
| Morocco | 13.7 | 48.5 | 2,122 |
|  |  |  |  |

Because the skill mix of immigrants from various regions differs, it is conceivable that the migration-status variation in educational ambitions largely reflects variations in the source countries rather than differences in children's exposure to Italian schools. In fact, after introducing country of origin into the model, the effect of migration status on educational expectations and aspirations disappears.

However, the country-specific variation noted in Table 6.2 persists inasmuch as the point odds ratios indicate that students whose parents hail from India and China are only . 47 and .42 times as likely as native Italians to report that they expect to enroll in high school, and they are only half as likely to indicate that they expect to attend a university. As in the descriptive results, youths of Moroccan origin are significantly less likely than Italian youths of similar family backgrounds to report that they expect to enroll in high school, but their lower ambitions do not carry over to tertiary plans. Only youths whose parents hail from South America surpass the long-term educational aspirations of native Italians from similar family backgrounds.

To better appreciate ethnic variation in educational goals, I estimate two models: one that is conditioned by demographic and family variables and another that does not include any of the family background or demographic controls. Figures 6.1 (high school) and 6.2 (university) compare the marginal effect of country of origin with and without standardizing the groups for systematic differences in social and demographic characteristics. My results indicate large differences in both short- and long-term educational ambitions according to parents' country of origin. These differences signal potential cultural divisions between native Italians and the children of immigrants unless their educational attainments can be equalized.

Figure 6.1. Short-term expectations: comparison between odds ratios of the variable Ethnic origin comparing models with and without other covariates


Ref. Natives=1

Country of origin + other covariates
$\square$ Only country of origin

Figure 6.2. Long-term aspirations: comparison between odds ratios of the variable Ethnic origin comparing models with and without other covariates


### 6.2.5. Friendships and educational goals

Several studies focus on the effect of peers on educational outcomes without specifying what aspect of friendship influences ambitions and achievements. My research question is: To what extent does friendship influence the educational goals of immigrants' children? Friendship ties can be relevant in defining educational expectations because friendships embody social capital, which in a school context can facilitate scholastic achievement and the setting of educational goals.

The basic idea of my analysis is to first show the relevance of the perceived peer ties on expectations and subsequently to examine the influence of peers (schoolmates) on educational ambitions. Therefore, my first step is to understand whether declaring strong friendship ties or good relationships with Italian natives or immigrants' children enhances the educational ambitions of children of immigrants. Friendship ties, measured through self-assessment, are related to the concept of network social capital, a resource attributed to people because they are members of social groups and networks (Mouw 2006). The testable implication is that students' social networks and their interactions with friends, acquaintances, or groups may shape their individual ambitions.

Table 6.3 summarizes the results from logistic models that, controlling for the same variables used in the previous model (sex, migration status, socioeconomic status, education level of parents, zone of residence, and number of siblings), introduce aspects of network social capital as predictors of educational ambitions. I develop my analyses on the subsample of youths with immigrant parents. Excluding native Italians reduces the number of observations to 2,557 . The results show that scholastic friendship ties are associated with high ambitions: students with immigrant backgrounds who think that schoolmates are really important tend to declare high short- and long-term educational goals. Although immigrants' children who have Italian friends declare more ambitious plans (especially long-term aspirations) than second-generation youths, meeting more friends with immigrant background is associated with lower short-term educational expectations. In other words, self-segregation by nativity may further undermine educational ambitions.

Table 6.3. Effects of different friendship ties on short- and long-term expectations

|  | Immigrants' children |  |
| :--- | :--- | :--- |
|  | Short-term | Long-term |
| expectations | aspirations |  |
|  | High | High aspirations |
| Classmates are really important | $1.13^{* * *}$ | $1.20^{* * *}$ |
| Having Italian friends | $1.72^{* *}$ | $2.04^{* * *}$ |
| Having immigrant friends | 0.80 | 1.23 |
| Having more Italian friends | 1.17 | $1.28^{* *}$ |
| Having more immigrant friends | 0.83 | 0.90 |
| Meeting Italian friends out of school often | 0.97 | 1.00 |
| Meeting immigrant friends out of school often | $0.89^{* *}$ | 0.99 |

Notes:
Models control for sex, migration status, socioeconomic status, education level of parents, zone of residence and number of siblings. Analyses are weighted, clustered and presented as odds ratios. See Appendix D and E for complete models.
Significance: $* * *<0.01 * *<0.05 *<0.1$

However, these analyses do not establish a causal relationship between friendship ties and educational expectations. Firstly, I lack comprehensive information on the complete friendship network; furthermore, the reduced form models do not consider "homophily" in friend selection. This term refers to the tendency for individuals to spend time and share experiences with individuals who are similar, which is reflected in their inclination to choose friends with similar characteristics. Therefore, the observed effects of social capital may simply reflect "selection effects based on the myriad of nonrandom ways in which people become friends" (Mouw 2006, 80).

Unfortunately, with the ITAGEN2 survey, I cannot disentangle causal influences of friendship networks from homophily in friend selection. In other words, I cannot say whether children with high-ambitions influence each other, or if friends sort into networks based on other unobserved factors, such as individual abilities, that determine educational ambitions. Another important aspect is the possibility that the higher motivated students attend specific schools. In my case, this risk is reduced because I select children attending compulsory public schools. While it has to be noted that families can potentially choose the school according to its reputation, it also has to be said that this usually happen when families
choose secondary tracks rather than primary schools. The vast majority of primary schools in Italy are public and attendance is mainly regulated by geographical proximity. With a few exceptions, children attend the primary school that is closest to where they live. However, the choice of checking the robustness of my results within a sample composed of schools in municipalities where there is no completion in recruiting students is a measure to deal with this relevant issue.

### 6.2.6. School context and educational goals

To understand the influence of school context on the educational goals of the children of immigrants, I identified pupils as nested in schools. For this analysis, I created a variable that measures the percentage of Italian students who desire to go to licei for each school. The main idea is that "predictions of the overall effect of schooling systems seem to depend on the social interaction between high- and low-ability students and resulting peer effects" (Entorf and Lauk 2008, 634). For instance, as mentioned in the literature review, educational attainment may differ on the basis of the mean level of achievement of the students composing the reference peer group (Cebolla-Boado 2007). I try to test this idea with respect to educational ambitions by examining the association between individuals' and schoolmates' ambitions.

It is difficult to establish a causal relationship between individual students' educational ambitions and the school context; however, I can investigate whether there is an association between the two. The specific research question addressed is: To what extent are the ambitions of immigrants' children influenced by the educational expectations of their Italian schoolmates? The sample comprised 2,275 children of immigrants divided into 166 schools.

I performed multilevel logistic regression, where the dependent variables were recoded into two categories, representing those who do or do not expect to attend high school and those who do or do not expect to attend university. I controlled for variables mentioned in the previous models. Table 6.4 reports three sets of estimates: the null models, the models with only individual level variables, and those with the school-composition variable.

Starting from the null models, I calculated the intraclass correlation coefficient (ICC) to estimate the proportion of variance explained by the school
context. The ICC is 0.08 for the analysis of short-term expectations and 0.06 for the estimates of long-term aspirations. The ICC represents the proportion of variability of educational expectations explained by different schools. The results are significantly different from zero, indicating that schools influence expectations at the individual level. The null models indicate the extent to which variation in educational expectation is captured by variation in educational ambitions across schools. My results indicate that school context matters. Between 6 and 8 percent of the variation in educational expectations of the children of immigrants may be attributed to differences in the average ambitions of Italian students in the schools they attend.

First generations have lower expectations than second generations, despite their time of arrival to the host country. However, only childhood immigrants show lower long term aspirations, compared to second generations. Gender is strongly associated with educational ambitions, with females demonstrating higher levels of educational expectations and aspirations than males. The role of the socioeconomic status of parents is determinant. Children whose parents are low educated and/or have a low socioeconomic position demonstrate lower educational ambition. However, my core measure warrants further discussion because it addresses whether the educational ambitions or goals of native Italians are important in shaping the ambitions of immigrants' children. My results show that the children of immigrants have higher educational ambitions if they attend a lower secondary school with native Italians who have high ambitions. Their expectations to attend licei the following year are enhanced in schools where more than 33 percent of native Italian children have high ambition, and are even greater in schools where more than 66 percent of native schoolmates have high expectations. Results for long-term aspirations also reveal a positive association with educational aspirations of youths with immigration background but only when they attend a school where more than two-thirds of native Italian students have college aspirations.

Table 6.4. Multilevel logistic regression models: short and long-term expectations of children of immigrants in Italy. Odds ratios (data: ITAGEN).

|  |  | hort-term ex | tions |  |  | Long-term |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Model 1 <br> (null) | Model 2 <br> (I level variables) | Model 3 <br> (II level variable) |  | Model 1 <br> (null) | Model 2 (I level variables) | Model 3 <br> (II level variable) |
| Migration status |  |  |  | Migration status |  |  |  |
| Ref. Second generation immigrant |  |  |  | Ref. Second generation immigrants |  |  |  |
| Preschool immigrants |  | $\begin{aligned} & 0.77 * * * \\ & (.069) \end{aligned}$ | $\begin{aligned} & 0.77 * * * \\ & (.069) \end{aligned}$ | Preschool immigrants |  | $\begin{aligned} & 0.92 \\ & (.079) \end{aligned}$ | $\begin{aligned} & 0.93 \\ & (.079) \end{aligned}$ |
| Childhood immigrants |  | $\begin{aligned} & 0.83 * * * \\ & (.040) \end{aligned}$ | $\begin{aligned} & 0.83^{* * *} \\ & (.040) \end{aligned}$ | Childhood immigrants |  | $\begin{aligned} & 0.85 * * * \\ & (.040) \end{aligned}$ | $\begin{aligned} & 0.85 * * * \\ & (.040) \end{aligned}$ |
| Adolescent immigrants |  | $\begin{aligned} & 0.84 * * * \\ & (.0273) \end{aligned}$ | $\begin{aligned} & 0.84 * * * \\ & (.027) \end{aligned}$ | Adolescent immigrants |  | $\begin{aligned} & 0.97 \\ & (.030) \end{aligned}$ | $\begin{aligned} & 0.97 \\ & (.030) \end{aligned}$ |
| Sex |  |  |  | Sex |  |  |  |
| Female |  | $\begin{aligned} & 2.38 * * * \\ & (.243) \end{aligned}$ | $\begin{aligned} & 2.38 * * * \\ & (.242) \end{aligned}$ | Female |  | $\begin{aligned} & 1.78 * * * \\ & (.167) \end{aligned}$ | $\begin{aligned} & 1.77 * * * \\ & (.166) \end{aligned}$ |
| Parents' education level |  |  |  | Parents' education level |  |  |  |
| Ref. High |  |  |  | Ref. High |  |  |  |
| Medium |  | $\begin{aligned} & 0.89 * * * \\ & (.027) \end{aligned}$ | $\begin{aligned} & 0.89 * * * \\ & (.027) \end{aligned}$ | Medium |  | $\begin{aligned} & 0.81^{* * *} \\ & (.023) \end{aligned}$ | $\begin{aligned} & 0.81 * * * \\ & (.024) \end{aligned}$ |
| Low |  | $\begin{aligned} & 0.45 * * * \\ & (.071) \end{aligned}$ | $\begin{aligned} & 0.45^{* * *} \\ & (.071) \end{aligned}$ | Low |  | $\begin{aligned} & 0.33 * * * \\ & (.047) \end{aligned}$ | $\begin{aligned} & 0.33 * * * \\ & (.047) \end{aligned}$ |
| Unknown |  | $\begin{aligned} & 0.85 * * * \\ & (.023) \end{aligned}$ | $\begin{aligned} & 0.85^{* * *} \\ & (.023) \end{aligned}$ | Unknown |  | $\begin{aligned} & 0.80 * * * \\ & (.020) \end{aligned}$ | $\begin{aligned} & 0.80^{* * *} \\ & (.020) \end{aligned}$ |
| Socioeconomic status |  | $\begin{aligned} & 1.02 * * * \\ & (.004) \end{aligned}$ | $\begin{aligned} & 1.02 * * * \\ & (.004) \end{aligned}$ | Socioeconomic status |  | $\begin{aligned} & 1.02 * * * \\ & (.004) \end{aligned}$ | $\begin{aligned} & 1.02 * * * \\ & (.004) \end{aligned}$ |
| Number of siblings |  |  |  | Number of siblings |  |  |  |
| Ref. 0 |  |  |  | Ref. 0 |  |  |  |
| 1 |  | $\begin{aligned} & 0.87 * \\ & (.069) \end{aligned}$ | $\begin{aligned} & 0.87 * \\ & (.069) \end{aligned}$ | 1 |  | $\begin{aligned} & 0.87 * \\ & (.067) \end{aligned}$ | $\begin{aligned} & 0.88^{*} \\ & (.067) \end{aligned}$ |
| 2 |  | $\begin{aligned} & 0.86^{* *} \\ & (.049) \end{aligned}$ | $\begin{aligned} & 0.87 * * \\ & (.049) \end{aligned}$ | 2 |  | $\begin{aligned} & 0.88 * * \\ & (.048) \end{aligned}$ | $\begin{aligned} & 0.88 * * \\ & (.048) \end{aligned}$ |
| 3 |  | $\begin{aligned} & 0.85 * * * \\ & (.044) \end{aligned}$ | $\begin{aligned} & 0.85 * * * \\ & (.044) \end{aligned}$ | 3 |  | $\begin{aligned} & 0.89 * * \\ & (.043) \end{aligned}$ | $\begin{aligned} & 0.89 * * \\ & (.043) \end{aligned}$ |


| More than 4 |  | $\begin{aligned} & 0.84^{* * *} \\ & (.036) \end{aligned}$ | $\begin{aligned} & 0.84^{* * *} \\ & (.036) \end{aligned}$ | More than 4 |  | $\begin{aligned} & 0.86^{* * *} \\ & (.034) \end{aligned}$ | $\begin{aligned} & 0.86^{* * *} \\ & (.034) \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Mixed couple |  | $\begin{aligned} & 1.06 \\ & (.130) \end{aligned}$ | $\begin{aligned} & 1.07 \\ & (.131) \end{aligned}$ | Mixed couple |  | $\begin{aligned} & 1.19 \\ & (.137) \end{aligned}$ | $\begin{aligned} & 1.21 \\ & (.140) \end{aligned}$ |
| Italians with high expectations |  |  |  | Italians with high expectations |  |  |  |
| Ref. Less than 33\% |  |  |  | Ref. Less than 33\% |  |  |  |
| 33-66\% |  |  | 1.34** | 33-66\% |  |  | 0.82 |
|  |  |  | (.202) |  |  |  | (.116) |
| More than 66\% |  |  | 2.07*** | Ref. Less than 33\% |  |  |  |
|  |  |  | (.406) |  |  |  | $\begin{aligned} & 1.23^{*} \\ & (.233) \end{aligned}$ |
| II level variance | 0.204 (.065) | 0.207(.076) | . 154 (.066) | II level variance | 0.181(.054) | 0.194 (.062) | 0.172 (.058) |
| Number of observations | 2,557 | 2,275 | 2,275 | Number of observations | 2,557 | 2,275 | 2,275 |
| Number of groups | 166 | 166 | 166 | Number of groups | 166 | 166 | 166 |
| LR test | 23.08*** | 15.88*** | 9.92*** | LR test | 28.40*** | 23.17*** | 19.42*** |

Notes: $* * *<0.01 * *<0.05 *<0.1$ Analyses are weighted and presented as odds ratios.

### 6.2.7. Conclusions

My results reveal several insights about the integration of the children of immigrants living in Italy. Firstly, migration status and country of origin are associated with different short-term educational expectations. I do not observe significant differences in the university aspirations of the children of immigrants and the children of natives (except for childhood immigrants). Specifically, my results partially confirm hypotheses about the association between nativity and educational ambitions. Immigrant youths have on average lower educational ambitions compared to Italian natives and the children of immigrants who are born in Italy. My results also corroborate the recent literature, showing that the children of immigrants have lower educational ambitions than natives do. Moreover, my results are consistent with the official data on educational attainment of immigrants' children living in Italy. In fact, enrollment data for the school year 2006-2007 reveals that only 2.5 percent of students attending licei are non-Italian compared to 10.6 percent in vocational schools. These official data corroborate the strong link between expectations and educational choice.

My analysis also shows that migration status has an impact, especially on short-term expectations. Long-term aspirations seem to not be influenced by age at migration. These results may indicate some differences between educational ambitions in the long-term and real expectations driven by actual scholastic results, influences from the family, and teachers. It is conceivable, on one hand, that students provide more realistic accounts of their expectations as the date for them to make secondary-school choices approaches. On the other hand, because university options are further into the future, students may be more inclined to express less realistic aspirations.

One possible explanation is that immigrant parents and their children perceive polytechnic schools and vocational schools as more secure options than licei because they focus more on technical skills and applied sciences. This may represent a better investment for entering the labor market. A technical education may also be seen as more transferable than a university education if the family plans to migrate to another country, including to their country of origin. However, a university education may be perceived as important and indispensable for some professions. A final possible explanation is the role of teachers. As discussed in Barban and White (2011), teachers may discriminate against immigrants by
counseling families to enroll their children in short-term educational tracks instead of more long-term educational paths that facilitate access to college or university. This selection in the secondary-school track may also lead to segregation in vocational schools.

Secondly, birthplace seems to have no significant effect on educational expectations and aspirations. Controlling for socioeconomic characteristics, second-generation children are similar to natives in terms of educational ambitions. This result suggests that second-generation children become more and more integrated and that these pupils allow themselves to have the same ambitions as their Italian peers. Unfortunately, there are no official data about real educational choice confirming this result in Italy, though it has been established in other national contexts (St. Hilaire 2002; Portes and Rumbaut 2001).

Thirdly, my results indicate a certain degree of heterogeneity among ethnic groups in terms of educational ambition, both in expectations and in aspirations. In particular, pupils with Chinese, Moroccan, Macedonian, or Indian backgrounds show lower academic ambitions than all others, while children whose parents come from developed countries have higher ambitions than natives. Previous studies show that Chinese, Macedonian, and Morocco children attending Italian schools fare better than children belonging to other ethnic groups (Barban and White 2011). One possible explanation for this could be that families from these ethnic groups are more selective when they invest in education for their children. In other words, the family decides to only invest in children who are expected to obtain high scholastic results. This can be linked to theories that highlight migration as a way to improve family status through investment in such children. However, my results indicate that country of origin is a determinant in defining educational ambitions, even when I control for other covariates. Ethnic ties and, consequently, ethnic social capital seem to have a great influence in determining children's expectations. Differences in long-term aspirations, however, are poorly associated with country of origin. It is interesting to note that this heterogeneity in country of origin mediates the effect of migration status. This suggests large differences between ethnic communities and shows the need for further studies on this topic.

Fourthly, I highlighted an association between friendship and educational ambitions. Looking at the relevance of schoolmates, I found that if immigrants' children think that schoolmates are important, they tend to have higher educational ambitions. Moreover, having Italian friends is associated with higher long-term aspirations, and having more non-native friends is associated (though
not significantly) with a lowering of educational ambitions The relevance of friends may also be seen as an indicator of integration. If a child thinks that friends are important, I can suppose he or she shares time with friends, and this could be a determinant of integration. In this case, my results confirm evidence from previous international literature for Italy: personal friendship networks are a determinant of educational ambitions.

In the last part of the study, I investigated whether the scholastic context contributes to the educational ambitions of immigrants' children. I calculated the percentage of Italian students with high educational ambitions for each school, and I looked at the association between this percentage and the individual ambitions of immigrants' children. My results show that a child of immigrants attending a lower secondary school where one-third of the Italians have high short-term educational expectations is more likely to also have high short-term educational expectations. If I look at long-term aspirations, the change happens when more than two-thirds of Italian classmates have high aspirations. Being part of a challenging context is, hence, clearly relevant for children of immigrants. This is perhaps my most relevant result, and it is in some ways another validation of the relevance of social capital and the influence of peers in shaping educational ambitions.

The analyses presented in this chapter are mainly descriptive, since I estimate statistical associations without a specific causal interpretation. Nevertheless, my effort represents one of the first attempts to study the educational expectations of the children of immigrants in Italy. Also, to my knowledge, this is one of the first descriptions of the educational expectations of immigrants' children at a national level. Moreover, the results provide some evidence that the educational ambitions of immigrants' children living in Italy and attending the eighth grade are associated with social capital and school context, which have been found in recent international literature to be relevant in influencing the educational expectations of children (Portes et al. 2010).

Starting from these results, it could be interesting to develop policies concerning the integration of immigrant children, to not only improve their scholastic output but also to empower them to become involved in social activities that facilitate the creation of strong ties between children of immigrants and children of Italians. Policy implications will be developed in the last chapter. Nevertheless, it is relevant to point out that the main indications deriving from this chapter are the need to consider policies that provide for children's participation in extracurricular activities that promote integration.
6.3.1 The role of migrants' children in shaping educational ambitions of natives

Using ITAGEN data, I look at the impact of social context on Italian students' ambition. Using multilevel models, I test whether the proportion of immigrants in the schools and interethnic friendships have an impact on native students' educational achievement. This part of the chapter offers the chance to propose a new policy perspective for the Italian case, as well as open up an exciting debate on policies for dealing with the presence of immigrants in countries with new migration.

Here are the research hypotheses that I will test in this part of the thesis: HP1: according to recent literature on the impact of the presence of immigrants' children on the educational performances of native students, I hypothesize that a growing presence of foreign students in a school is associated with a reduction on the educational expectations of natives.
HP2: I expect that perceiving friendship as relevant, and meeting friends often, could be a good indicator of social integration. Therefore, I hypothesize an association between this indicator and educational expectations and aspirations. More specifically, I consider the significance and form of friendship declared by students and test whether these aspects act positively on educational expectations. I expect that native students attending schools where there is high level of integration, measured as high number of friendship relationship between immigrants' children and natives, are associated with an increase of educational expectations and aspirations of natives.

### 6.3. Data and method

This second part of the chapter will be developed following the same pattern as the previous one. I use ITAGEN data, integrated with official data from the Ministry of Education concerning the number of foreign students in the schools. Dependent variables are the same as before: short term expectations and long term aspirations. In the main analyses I use a multilevel method to study the impact of context on the ambitions of native children. At the school level, I consider a variable that defines the proportion of foreign children in schools. I use
official data from the Italian Ministry of Education (dated 2004-2005 and previously used to define the survey sample), and I introduce a continuous variable concerning the presence of foreigners in my multilevel models.

My second research hypothesis is related to the relevance of microinteractions in school. Hence I identify variables that capture the relevance of friendship based on the dimension of social interaction. Friendships are operationalized using items that represent social interactions with schoolmates; namely the frequency of contacts among Italian and immigrant friends. I also consider students' perception of the value of friendship ties (see Chapter 5.3.3).

I therefore identify the proportion of Italian students with immigrant friends as a good descriptor of social interactions between natives and immigrants' children to identify context with high or low levels of integration among students.

Individual-level variables are relevant for describing Italians' expectations and aspirations, and because it is necessary to control for individual variables to identify the net effect of school variance on educational ambitions. At the individual level, the main variables concern parent human capital, demographic characteristics (sex, number of siblings and geographic area of residence) and social capital. Parents' education level was, as in the previous part of the chapter, defined using a dominance approach, considering the highest education level obtained by one of a student's parents. In the case of missing data concerning one of the two parents, I considered the one present in the dataset. The number of missing values also in this case is extremely high, almost $10.8 \%$ of respondents. Parents' education level was measured by asking the age of parents at the end of their educational career and was recoded in four categories: high (if he/she has studied until he/she was more than 20 years old), medium (15-19), low (less than 15) and unknown. Due to limitation of the data, which do not contain any measure of prior grades, I used age as a proxy of retaking, which can be considered a way to roughly taking in account individual performances.

As in the previous part of the chapter, a standardized measure of socioeconomic status (the ISEI scale) is used to determine each student's socioeconomic condition. I use the dominance approach to identify the highest occupation level between the student's mother and father and to have as few missing values as possible ( $6.6 \%$ of missing cases).
6.3.3. Results: The impact of context on educational expectations and aspirations

Recent studies on educational aspirations and attainment focus on the relevance of the school context in defining students' educational performances. I investigate school context by looking at two different aspects: social interactions between schoolmates and immigrants in the school. Since, as demonstrated in the descriptive analysis, the children of immigrants have lower ambitions than their native peers, I consider two aspects: Are schools where a high percentage of Italian students have many immigrant friends less competitive in terms of educational expectations and aspirations? And then, is the proportion of immigrants in the schools associated with educational ambitions? After examining these aspects, I demonstrate the relevance of friendship ties in shaping educational ambitions.

After looking at the difference between natives and children of immigrants, I now focus my attention on the first group. For this reason, the sample has been reduced to 3,774 cases, including only the Italian students. Looking at descriptive statistics I can clearly highlights some aspects: both gender and the educational status of parents are determinant to describing the educational expectations and aspirations of Italian students. Females denote higher levels of educational ambition, both in short- and long- term. About $60 \%$ ( $58.8 \%$ ) of females desire to attend licei versus less than $40 \%$ of males ( $34.4 \%$ ). The gap is sensibly reduced if I look at long term ambitions ( $56.6 \%$ vs $42.4 \%$ ). If I consider the educational status of parents I can clearly reveal that: firstly there is a high discrepancy between children with high skilled parents and those with low skilled parents (more than $60 \%-66.5 \%$ - of preference for licei in the first case versus about $29 \%$ in the second), and these differences maintain their homogeneity between short and long term ambition (long term expectations: $72.3 \%$ for high educated parents, vs $32.5 \%$ for low educated). Moreover, referring to this second aspect, as expected, preferences is moderately higher if I look at long term ambitions: the ambition to attend university is clearly higher for children whose parents have higher educational background.

To increase knowledge of the impact of context, I also look at the pure presence of immigrants in schools. This measure is another proxy for interactions (having many immigrants in the school facilitates friendships and intercultural exchanges) but is also a way of capturing school characteristics. I test a hypothesis
that has been analyzed in the recent literature about educational achievement. To my knowledge, educational expectations and aspirations have not been examined. I want to understand whether being involved in a school with a higher percentage of foreign students decreases students' individual expectations and aspirations. Although the Italian school system randomly assigns students, schools with a higher proportion of foreigners are supposed to be placed in areas with lower costs of living: immigrants are usually less skilled and paid less, so they are thought to live in areas with lower living costs, and where the chance of finding unskilled jobs is higher.

I perform three multilevel logistic models (Table 6.5): the first was an empty model, the second modeled without introducing individual-level variables, and the third introduced my main independent variable. From the null models, the relevance of school level in influencing educational ambition can be clearly understood. Moreover, the intraclass correlation coefficient (ICC) is 0.09 for educational expectations and 0.07 for aspirations. This means that only $9 \%$ in the first case and $7 \%$ in the second of the residual variation in the propensity for having high educational ambitions is attributable to unobserved community characteristics. However, part of the variance is due to demographic variables.

The literature identifies some aspects which are determinant in shaping educational expectations and aspirations: socioeconomic status and gender.

Looking at socioeconomic status, the dominant approach in the literature is called the "status attainment model", and it has been developed on the basis of previously mentioned theoretical definitions from the late 1950s through the 1960s (Sewell et al. 1969, 1970; Duncan and Duncan 1969; Duncan et al. 1972; Horan 1978). Authors looked at variations in educational (and occupational) aspirations (the division between aspirations and expectations was not already defined), on the basis of individual differences in terms of belonging social class. The idea was that aspirations reflect socioeconomic inequities and derive from parental human capital (level of instruction) and economic resources. The direction of the impact of parental educational attainment and income on educational ambition is clear: a higher SES corresponds with higher educational expectations and aspirations. I can mention numerous examples in the literature, both recent and past (Sewell 1971; Duncan et al. 1972; Alexander and Eckland 1974; Kao and Tienda, 1998; Sewell et al. 1969; St Hilaire 2002; Feliciano 2006; Portes et al 2010).

Considering gender differences, while in the past there were no clear distinction between male and female aspirations and expectations (Kao and

Tienda 1998), recent literature confirms that females have superior educational ambitions than males (Fernàndez-Kelly and Konczal, 2005; Feliciano and Rumbaut, 2005, Portes et al. 2010).

Odds ratios show an extreme discrepancy between boys' and girls' expectations and aspirations, especially in short-term ambitions. Girls are more ambitious than boys in terms of educational goals. Parents' socioeconomic status, rather than just their educational level also makes a difference. The higher parents' socioeconomic status is, the higher the odds are that their children have high educational ambitions. At the same time, the lower parents' educational background is, the lower their children's educational aspirations will be. If we look at Italian social mobility, these results are not surprising. Recent research in Italy clearly shows that familiar background is the most important aspect for determining social mobility in education and the job market. In Italy, a child with low-skilled parents is not likely to attain a high social position (see Schizzerotto and Marzadro 2010).

Trying to verify my core hypothesis, I introduce a second-level variable into the model that captures the percentage of foreign students in the school. The data come from official statistics. In the case of a missing variable (due to the absence of official data regarding the school), I calculate the mean presence of foreign students of the province where the school is located. Surprisingly, there is no evidence of an association between a higher proportion of foreign students with higher individual educational expectations. In contrast, when the percentage of foreign schools increases, there is a decrease in individual aspirations.

Table 6.5. Multilevel logistic regression models: educational expectations and aspirations of Italian pupils. Percentage of foreign pupils in the school


|  | $(.036)$ |  |  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
|  | $(.036)$ |  | $(.036)$ | $(.035)$ |  |  |  |
| II level variance | $0.351(.066)$ | $0.238(.057)$ | $0.198(.053)$ | II level variance | $0.251(.053)$ | $0.196(.050)$ | $0.147(.045)$ |
| Number of observations | 3744 | 3744 | 3744 | Number of observations | 3744 | 3744 | 3744 |
| Number of groups | 212 | 212 | 212 | Number of groups | 212 | 212 | 212 |
| LR test | $105.07 . * * *$ | $34.09 * * *$ | $26.66^{* * *}$ | LR test | $69.50 * * *$ | $32.43^{* * *}$ | $18.46^{* * *}$ |

[^1]Although this second result agrees with the literature on achievement, I tried to find more information about the results concerning expectations. Graph 6.1 shows the percentage of Italian students with high educational aspirations in the school and the proportion of foreigners. Without considering outliers (which were not included in the multilevel analyses), the following results are interesting:

1. Most of the sample includes schools with less than $20 \%$ foreign students.

This statement requires clarification: firstly, data about the presence of foreigners were collected in 2004-2005, when the number of foreigners in schools was not as high as today. Second, for sampling reasons, many schools with less than $10 \%$ of students with immigrant background are in the southern part of Italy, which has a less developed immigration tradition.
2. The graph confirms the results of previous analyses: in this case, there is no evident correlation between the proportion of foreigners and the percentage of students with high ambitions.
In schools with less than $20 \%$ of foreign students, $10 \%$ to $80 \%$ of students might have high educational expectations. Schools with more than $20 \%$ of foreign students seem to have less ambitious students, but the number of cases in this sample is not large enough to investigate this aspect.

Graph 6.1. Schools by percentage of native students with high educational expectations and share of foreign students


As seen in the previous part of the chapter (6.2.5) among other aims, the ITAGEN survey investigates the relevance and frequency of friendship ties. I previously demonstrated that friendship ties are strongly associated with the educational ambitions of immigrant's children. In this chapter I have two objectives: firstly to test whether I can claim this association for native students as well, and secondly to test whether I can focus my attention on the relationship between Italian children and children of immigrants. I therefore answered the following question, which leads me to better develop the context analysis: Are friendship ties with the children of immigrants associated with educational ambitions?

To test my second hypothesis I define a variable that captures the proportion of Italian students in each school who have immigrant friends. The aim of this part is to test whether contexts with a higher level of integration and interactions between natives and immigrants are favorable to high educational ambitions for natives. The variable presents varying values showing that between $30 \%$ and $100 \%$ of students in each school have immigrant friends.

The logistic regression models in Table 6.6 demonstrate that the pattern shown for immigrants' children is confirmed if I consider native children: students who place high relevance on friendship are more ambitious in the shortand long-term. Thinking that friends are important can be interpreted as a sign of good social interactions. Children who consider friendship relevant are supposed to be involved in fulfilling relationships. Having immigrant friends, on the contrary, reduces aspirations, while meeting Italian friends outside of school enhances secondary school expectations. The frequency of meeting friends and the prevalence of friends with immigrant background or Italian friends are not statistically significant. However, friendship interactions are relevant in defining educational ambitions.

Table 6.6. Results of variables concerning friendship ties in short and long term ambitions

|  | Native pupils |  |
| :--- | :--- | :--- |
|  | Short term expectations | Long term aspirations |
| Class mates are really important | High expectations | High aspirations |
| Having immigrant friends | $1.14^{* *}$ | $1.19^{* * *}$ |
| Having more Italian friends | 0.91 | $0.67^{* *}$ |
| Having more immigrant friends | 1.15 | 0.96 |
| Meeting often Italian friends out of school | 1.00 | 0.85 |
| Meeting often immigrant friends out of school | $1.13^{* *}$ | 1.03 |

Notes:
Models control for sex, migration status, SES, education level of parents, zone of residence and number of siblings. See Appendix F and G for complete models.
Analyses are weighted, clustered and presented as odds ratios
***<0.01 **<0.05 *<0.1

To explore the relevance of interethnic friendships in determining educational expectations and aspirations further I perform two models. The first is an empty model, while in the second I control for characteristics at the individual level. My first relevant result deals with short-term expectations. The null model, in fact, demonstrated that there is a "school effect": attending a school with a high percentage of students who have friends with immigrant background seems to enhance natives' expectations. However, this feasible but statistically significant effect remained once I controlled for individual variables. In the case of long-term aspirations, the effects appeared once I introduce individual and contextual characteristics (Table 6.7). This is the second piece of evidence that, in terms of educational ambitions, individual characteristics are more relevant than contextual characteristics regarding the presence of immigrants' children.

Table 6.7. Multilevel logistic regression models: educational expectations and aspirations of Italian pupils (Data: ITAGEN)

| Expectations |  |  |  | Aspirations |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | del 1 | Model 2 |  | Model 1 | Model 2 |
| \% of natives with immigrant friends | 1.01* | $\begin{aligned} & 1.01^{* * *} \\ & (.004) \end{aligned}$ | \% of natives with immigrant friends | 1.00 | $\begin{aligned} & 1.01^{* * *} \\ & (.003) \end{aligned}$ |
| Sex: Female |  | $\begin{aligned} & 3.16 * * * \\ & (.249) \end{aligned}$ | Sex: Female |  | $\begin{aligned} & 1.93^{* * *} \\ & (.146) \end{aligned}$ |
| Parents' education level Ref. High |  |  | Parents' education level Ref. High |  |  |
| Medium |  | $\begin{aligned} & 0.86^{* * *} \\ & (.021) \end{aligned}$ | Medium |  | $\begin{aligned} & 0.81^{* * *} \\ & (.020) \end{aligned}$ |
| Low |  | $\begin{aligned} & 0.30^{* * *} \\ & (.037) \end{aligned}$ | Low |  | $\begin{aligned} & 0.25^{* * *} \\ & (.030) \end{aligned}$ |
| Unknown |  | $\begin{aligned} & 0.84 * * * \\ & (.020) \end{aligned}$ | Unknown |  | $\begin{aligned} & 0.77 * * * \\ & (.018) \end{aligned}$ |
| Socioeconomic status |  | $\begin{aligned} & 1.03^{* * *} \\ & (.003) \end{aligned}$ | Socioeconomic status |  | $\begin{aligned} & 1.03^{* * *} \\ & (.003) \end{aligned}$ |
| Age |  | $\begin{aligned} & 0.44 \% \\ & (.047) \end{aligned}$ | Age |  | $\begin{aligned} & 0.51^{* * *} \\ & (.049) \end{aligned}$ |
| Number of siblings Ref. 0 |  |  | Number of siblings Ref. 0 |  |  |
| 1 |  | $\begin{aligned} & 0.92 \\ & (.051) \end{aligned}$ | 1 |  | $\begin{aligned} & 0.96 \\ & (.050) \end{aligned}$ |
| 2 |  | $\begin{aligned} & 0.94 \\ & (.040) \end{aligned}$ | 2 |  | $\begin{aligned} & 0.92 * * \\ & (.037) \end{aligned}$ |
| 3 |  | $\begin{aligned} & 0.97 \\ & (.046) \end{aligned}$ | 3 |  | $\begin{aligned} & 0.93^{*} \\ & (.044) \end{aligned}$ |
| More than 4 |  | $\begin{aligned} & 0.89 * * * \\ & (.036) \end{aligned}$ | More than 4 |  | $\begin{aligned} & 0.93 * * \\ & (.036) \end{aligned}$ |
| II level variance | 0.345 (.066) | 0.197(.054) | II level variance | 0.256(.053) | ) 0.166 (.048) |
| Number of observations | 3744 | 3744 | Number of observations | 3744 | 3744 |
| Number of groups | 212 | 212 | Number of groups | 212 | 212 |
| LR test | 101.40*** | 29.98*** | LR test | 72.03*** | 27.52*** |



Large differences in the proportion of the children of immigrants in a school can lead to selectivity. The children of immigrants are clustered in poor schools and neighborhoods. In every Italian city, there are "high-level schools" with a low percentage of immigrant students, high-performing natives and parents with high cultural capital (which, as demonstrated, is a good predictor of good scholastic performances) and "low-level schools" with high percentage of immigrant students, low-performing natives and parents with low cultural capital. To address this problem of selection, I modify the sample and performed the analyses again. From the official data of the Minister of Education I identified all municipalities where there was only one school. I checked the availability of data in the ITAGEN sample for those municipalities and excluded cities that have more than one middle school from the analyses. This resulted in a new sample that avoided these problems of selection across neighborhoods. The presence of only one school in the municipality means that all children residing in the area attend that school. The sample is then reduced to 1,145 students, attending 62 schools.

Results are very interesting, definitely confirming previous analyses.
The distribution of the main covariates is the same as in the previous sample: children come predominantly from northern regions (40\%), half are girls, and $20 \%$ of parents have low education levels, $41 \%$ have medium education levels and $23 \%$ have high education levels. The mean proportion of foreign students in schools is $11 \%$. About $56.2 \%$ of the sample declared they intended to attend high school, while $52.6 \%$ wished to attend university. The gender gap was extremely high: $57 \%$ of girls had high short-term expectations, compared to $30.7 \%$ of boys. The gap is slightly reduced if we look at long-term aspirations, because although the percentage of girls remains almost constant (55\%), of the percentage of boys increases to $39.4 \%$. Students in the south are more ambitious than those in the north: $40 \%$ of children living in the north declared that they expected to attend high school and wanted to attend university, while $50 \%$ of those in the south have high short- and long-term ambitions.

I then performed multilevel models to understand the role of school context in shaping educational ambition. The coefficients remain constant with respect to those presented in the total sample. This evidence does not add any substantial information to this research; however these models are relevant in
confirming the robustness of the results. Even in locations where immigrants' children are randomly allocated, their presence in schools has no impact on shortterm educational expectations, while there is evidence of an impact on long-term aspirations (Table 6.8).

Table 6.8. Multilevel logistic regression models: educational expectations and aspirations of Italian pupils in municipalities with only one middle school


Notes: $* * *<0.01 * *<0.05 *<0.1$ Analyses are weighted, and presented as odds ratios.

### 6.3.5. Conclusions

These analyses were developed to present the actual condition of the educational aspirations and expectations of Italian students, and to develop an understanding of whether the high presence of immigrants' children in Italian schools has an impact on educational ambitions.

Following recent literature on the impact that the the presence of immigrant students in schools has on educational attainment, I expected to find that a large proportion of immigrants would have reduced individual aspirations and expectations. The results confirm this association if university aspirations are considered; however if short-term educational expectations are examined, this association is not present. Hence, if the presence of foreigners represses the desire to have an academic career, their presence has no association with high school level expectations. Natives attending schools with a high number of foreign born children are not influenced in term of their short term expectations, which are strictly connected to their actual choices. This means that if they plan to attend high school in the near future, they will do so.

I explored the association between the proportion of foreign students in schools, social interactions among natives and immigrants and educational aspirations and expectations further. Following international literature, my hypothesis was that many interactions would have lead to lower individual ambition. The results in fact go into the opposite direction. Schools where native students interact with foreigners present positive, significant even if weak, association with enhanced individual ambitions. Moreover the relevance of friendship ties is a clear indicator of high educational ambitions. The literature offers an explanation of this result. In 1954 Allport developed intergroup contact theory, subsequently developed by Pettigrew (1998). This theory states that 'constructive' intergroup contact reduces negative intergroup attitudes. Moody (2001), reporting on intergroup contact theory states that intergroup contact can alleviate the effect of cultural distance, and that where there are more contacts the host society becomes more experienced with immigration and the integration of immigrants. Hence it is plausible that there is an effect of familiarization, over and above individual contact with immigrants, that can be a sign of a more positive environment. Inter-ethnic contacts, in fact, are likely to decrease negative attitudes, prejudice, perceptions of threat and sense of social distance among members of the majority population (e.g. Pettigrew, 1998; McLaren, 2003;

Pettigrew and Tropp, 2006; Wagner et al., 2006; Schneider, 2008 in Semyonov and Glikman 2009). Hence, natives that are in more contact with the children of immigrants demonstrate much more attention to integration and, potentially, live in a more stimulating environment. This is a possible explanation for my result.

Another aspect that clearly emerges from my results is the role of individual characteristics. The models clearly show that individual characteristics (mainly sex and socio-cultural familiar background), more than contextual aspects, affect educational ambitions. Italian girls are more ambitious than boys, and the higher parents' human capital is, the higher their chance of having a child with academic aspirations and expectations is.

Despite the fact that the intent of this thesis was to define the role of context, my findings demonstrate the persisting relevance of individual background in defining educational outcomes. Ascriptive status still determines ambition, becoming a potential obstacle for future social mobility.

To conclude, my results demonstrate the inappropriateness of the tendency to define the presence of foreign students as a depressing factor for natives. On the contrary, schools with high levels of integration, in terms of interactions among students, offer rich and ambitious environments for natives, despite the relevance of individual characteristics.

The final chapter of the thesis is devoted to the discussion of the policy implications of my results. However, as pointed out in the analyses, looking at the same hypotheses with more recent data, where schools have a higher number of foreign students could be interesting. Nevertheless, since the starting points of my analyses were the growing presence of students in the schools and the recent measure of the Ministry of Education to introduce the 30\% threshold of immigrants' children in each classroom, my results clearly show that there is no negative impact from the presence of immigrants' children on the educational expectations of natives. Moreover, it is my opinion that new policies have to be developed with the specific aim of giving both native students and children with immigrant background real occasions to meet, share experiences and develop real social integration. Further implications will be developed in the next chapter.

## Discussion and conclusions

My thesis had the aim of defining the role of school context in shaping the educational expectations and aspirations of both immigrants' children and natives in Italy and Belgium. Despite my objective, it is clear that my results reveal the persistence of old types of inequalities which are linked to family background, ascribed characteristics, and the possibility of parents being able to guarantee both material and cultural resources.

However one of the clearest outputs from my analyses was the confirmation that school context is determinant in shaping the educational performance of both the children of immigrants and natives. I demonstrated the influence of both schoolmates and friendships and of school resources and family involvement in school activities on the formation of educational expectations and aspirations. On the flip side, my results clearly showed that the growing presence of foreign students in schools has not had a depressing impact on natives' educational expectations.

Each empirical chapter endeavored to answer specific research questions and, taken together, allowed for the identification of the aspects of school context that need to be strengthen in order to enhance the educational ambitions of immigrants' and natives' children. Results from these chapters also allowed for the proposal of several strategies for the assimilation of the children of immigrants, focusing on school context.

The first empirical chapter (Chapter 5) explored the role of school context in shaping educational expectations through an international comparison. I verified the association between school resources and parental involvement in school activities with educational expectations. I then explored the role of parents' background and family resources in shaping educational expectations. The specific research questions posed in this chapter were:

- To what extent do school resources explain the differences in educational expectations between natives and children with immigrant backgrounds?
- Does parental involvement in the school enhance the educational expectations of natives and immigrants' children?
- Are the educational expectations of the children of immigrants lower overall compared to those of natives?
I answered these questions using PISA2009 data for Italy and Belgium. My findings indicated that: firstly, students attending schools with more
resources are more likely to have higher educational expectations. However, the resources of the school do not explain the gap between majority and minority students in terms of expectations. Moreover, regarding parental involvement, it is clear that it enhances the educational expectations of children, even if it does not explain all of the differences between natives and immigrants' children. While in Italy the second generation has lower educational expectations than the first generation and are more likely to consider ending their educational career at the end of secondary school, in Belgium the second generation demonstrates the same patterns as natives, while first generation immigrants have lower educational expectations. Finally, the possession of home resources enhances educational expectations without diminishing the differences between immigrants' children and natives.

The second empirical chapter (Chapter 6) is devoted to the analysis of the Italian case. It is divided into two parts. The first part aims to analyze whether the educational expectations and aspirations of the children of immigrants living in Italy are mediated by school context. To this end, I examined school context in terms of friendship ties and the presence of highly ambitious native students in the school.

I answered the following research questions:

- To what extent does the presence of Italian students with high educational expectations shape the educational expectations and aspirations of immigrants?
- Is the presence of friendship ties relevant in defining the educational expectations of immigrants' children?
- Is there a gap between the individual educational expectations of the children of immigrants and those of natives?
- What are the characteristics associated with lower levels of ambition among immigrants' children attending Italian schools?
I used ITAGEN data and focused my attention on children attending $8^{\text {th }}$ grade (final year of middle school). I calculated the percentage of Italian students with high educational ambitions for each school, and I looked at the association between this percentage and the individual ambitions of immigrants' children. My results showed that a child with an immigrant background attending a lower secondary school where one third of the Italians have high short-term educational ambitions is more likely to have high short-term educational ambitions themselves. The propensity to attend high school increases when the percentage of highly motivated natives rises above $66 \%$. In looking at long-term ambitions, I observed the same pattern
but the threshold is higher: a change occurs when more than $65 \%$ of Italians have high ambitions. Being part of a motivating context is, therefore, clearly relevant for the children of immigrants. In this same chapter I also highlighted an association between the relevance of friendship and educational ambitions. Looking at the relevance of schoolmates, I demonstrated that if immigrants' children think that schoolmates are important, they tend to have higher educational ambitions. Moreover, if, on the one hand, having Italian friends is associated with higher long-term ambitions, having more foreign friends is associated with lower educational ambitions on the other.

The second part of the second empirical chapter (Chapter 6) focused on the educational expectations and aspirations of Italian students. I aimed to understand the extent to which they are influenced by school context and, in particular, by the proportion of immigrants' children in the school.

In this phase of the thesis, I answered the following research questions:

- Is the proportion of immigrants' children within a school relevant to native children's educational expectations and aspirations?
- Is the presence of friendship ties relevant in defining the educational expectations of natives in Italy?
- Which characteristics of Italian students are associated with lower levels of ambition?
I analyzed the impact of the presence of immigrants on the educational expectations of natives. I used ITAGEN data concerning the Italian case.

My analyses tested the association between the presence of foreign children in the school and individual educational expectations and aspirations. If, on the one hand, I consider university aspirations, the presence of immigrants reduces natives' ambitions. On the other hand, this association is not present if I look at short term educational expectations. Hence, while arguably the presence of foreigners represses desires for an academic career, I also observe that there is no association with the more realistic expectation of attending high school.
My results confirmed that for natives the relevance of friendship ties is a clear indicator of high educational ambitions as well. Moreover, schools in which native students interact with foreigners see higher individual ambitions. Individual characteristics (mainly gender and socio-cultural familial background) are the main indicators shaping short and long term
educational ambitions. Italian females are more ambitious than males. Furthermore, the higher the human capital of parents, the greater the likelihood of having a child with high academic aspirations and expectations is.

Before discussing my results, it is helpful to remember that the decision not to pursue an academic career may be a rational decision. Data on the actual educational choices of the children of immigrants and on the returns from education will allow me to better explain this point. I specifically focused on the Italian case for three reasons. Firstly, both Italian natives and immigrants' children living in Italy have among the lowest levels of educational expectations in Europe (Chapter 4). Secondly, Italy was included in all my empirical chapters and is the country I examined to the greatest extent. Finally, Italy is a country of relatively new migration, where policies concerning integration are at an early stage and the choice of school is entirely up to the student and their family.

The percentage of immigrants' children (official statistics refer to children without Italian citizenship) attending secondary school in Italy has increased rapidly over the past few decades. Foreigners attending secondary school in the 2001-2002 school year made up $14 \%$ of the total scholastic population, this number rose to $21.6 \%$ in the 2010-2011 school-year. Only $9 \%$ of immigrants' children attending secondary school in the 2010-2011 school year were born in Italy (second generations).

More broadly, during the 2010-11 school year, 2,663,684 students were enrolled in secondary schools in Italy, 2,510,171 Italians and 153,513 foreigners respectively. Foreigners were predominantly enrolled in vocational schools $(62,080)$ and technical institutes $(58,340)$, compared to high schools $(28,675)$ or art schools $(4,418)$. Indeed, professional institutes generally tend to be characterized by a greater concentration of foreigners; on average there are 11.4 foreigners for every 100 students enrolled. In technical institutes they make up $6.5 \%$ of the population, and respectively $4.6 \%$ and $2.5 \%$ in art schools and high schools.

This basic information confirms my results on educational expectations: immigrants in Italy continue to be more likely to attend vocational and technical institutes than to attend high schools. They also tend to expect to attend vocational and technical institutes more so than high school.

The choice of vocational or technical institutes may be due to perceptions of the actual opportunities offered by the host country. Such perceptions may not be explicitly recognized by the children interviewed,
but may be an expression of their parents' ideas of their academic future. Unfortunately, neither the ITAGEN nor the PISA data allow for verification of this aspect and no indicator of the educational expectations of parents exists. The literature confirms, however, that parental expectations are highly correlated to those of children and to their education outcomes. In any case, receptivity of the labour market can in part explain the rationality of such educational choices, as well as drive the decision to leave the educational system early. Such observations suggest the need to maximize returns from education in a country where the employment rate for young university graduates and high school diploma holders is clearly more favourable to the latter. The income of university graduates is higher than that of high school graduates only after the age of 26 (Rilevazione Forze Lavoro ISTAT, 2010).

The following chart (Graph 7.1) clearly depicts the much higher rate of employment among high school graduates compared to university graduates up until the age of 30 . For a family that needs immediate economic resources, it is not rational to invest in the education of children. Such families tend to encourage their children to choose vocational and technical schools which, in addition to often being of shorter duration, guarantee a preparation directly spendable on the labour market.

Graph 7.1. Unemployment rate of high school and university graduates in Italy (2010)


Source: Isfol elaboration of data on Labour Forces (2010)

If the Italian government wishes to improve the educational (and consequently, occupational) outcomes of the children of immigrants, they should start by enhancing their ambitions and enabling them to envision futures similar to those imagined by their Italian counterparts. Policies should focus above all on the need to help migrant families afford the economic expense of attending university and the loss of income that results from the decision to not enter the labour market immediately.

Before presenting some ideas on how to improve the assimilation process of young foreigners, I briefly reflect on the results of my analysis compared to patterns of assimilation. Leading theorists of assimilation (Portes et al. 2009) define educational expectations as "early adaptation outcomes". As such, they can provide important information about how the children of immigrants are adapting to the host country. My analysis did not take into account some aspects of assimilation theory that are clearly important (for example, I did not touch upon the question of racism), as they are beyond the goals of my study. Nevertheless, the data do reveal some interesting aspects. From my analysis it appears that the educational expectations of second generations may in some cases be higher than those of natives (in Belgium). In Italy, however, they are much lower in percentage terms than those of natives, although they also depend heavily on the characteristics of the child's family and ethnic origin. This suggests that second generation immigrants living in Italy who come from families of low economic and cultural levels are highly at risk of "downward assimilation," halting the development of intergenerational social mobility.

Based on these preliminary remarks, I now turn to the contribution my thesis can make to create the necessary conditions such that children of immigrants and natives will raise their educational expectations. My thesis aims to identify which aspects of the school context and the social interactions that take place within it must be strengthened to create an environment where students can maximize their performance. Furthermore, within my thesis, I demonstrated that the impact of immigrants on natives can be defined as successful, and I identified which aspects of school resources and interactions in the school environment should be improved in order to better the assimilation process of the children of immigrants.

Hence, the focus of this discussion is on policies related to the necessity of strengthening social interactions and the equal distribution of resources among schools. Moreover, as demonstrated in the final empirical chapter, the importance of parents' involvement begs further development of policies specifically devoted to this aspect.

In the following section I present a series of proposals derived from my empirical analyses.

Despite territorial differences, my results showed the persistence of old kinds of inequalities in educational expectations. These inequalities are linked to family background, ascribed characteristics, and parents' ability to guarantee both material and cultural resources. As mentioned in the literature review, recent studies on educational outcomes focus their attention on the definition of primary and secondary effects. In this sense, the floor is still open to new analyses and the focus on the individual aspects is still relevant.

That said however, the role of the school is also clearly determinant, at least in supporting children to continue after secondary school level. School can act in two ways: firstly by enhancing resources that can alleviate the lack of family assets and secondly by increasing the involvement of parents in school activities.

In fact I demonstrated that, when also controlling for familial characteristics and assets, schools with more resources have more pupils that expect to continue their academic career after secondary school; although they don not have any impact on the ambition of already motivated students, and hence on the propensity to reach tertiary level (instead of attending upper secondary courses). The presence of highly qualified teachers is certainly a key factor, and one that is heatedly debated in places such as the U.S., where relevant studies demonstrate the effect of quality teachers on the educational achievement of pupils (Hanushek 2011). Official programs designed by Congress also call for an increase in the presence of highly qualified teachers in schools. The interest of European policy makers in this topic has also been increasing. Although the jurisdiction of the European Commission is limited in the area of education, it has recently given considerable attention to the quality of teachers, thus stimulating national governments to invest in improvements in this area. Recent examples of such policy documents include Common European Principles for Teacher Competences and Qualifications and Improving the Quality of Teacher Education, both published by the European Commission (European Commission, 2005; 2007). In response to these Commission documents, the European Council has also published its conclusions on the quality of teacher education (European Council, Nov 2007). Hence much attention is being currently paid to this topic, and as such my thesis is quite pertinent to policy makers interested in these themes.

As might be expected parental involvement, as an indicator of parents' interest in their children's educational activities, is associated with high educational expectations among children. Policies that support parent meetings provide parents with up-to-date information about their children in an easy-to-understand format (accounting, for example, for the linguistic challenges that many migrant families face when interacting with the school), and coordinate involvement activities, are just a few suggestions of ways to improve parental involvement in the educational activities of their children. In this way, the role of parents in assisting their child's learning would be strengthened and they would be involved in school decision making. Also along these lines, measures will need to take into account the difficulties of involving immigrant parents in their children's school. Policy makers should consider that two of the main barriers to such involvement include language problems and culture differences between schools and families.

In the second empirical chapter, I demonstrated that the relevance of friends is strongly associated with high educational expectations of both children of immigrants and natives, and that interethnic ties do not have any negative effect on educational expectations. The relevance of friendship may be seen as an indicator of integration. If a child thinks that friends are important, we can suppose she spends time with her friends and this could play a fundamental role in terms of integration. In this case, my results for Italy are in line with evidence from previous studies in the international literature: personal "network social capital" is a determinant of educational ambitions. Moreover, while the presence of motivated children enhances the educational expectations of immigrants, there is no effect on natives' short term expectations due to the presence of foreign students in the school. Given these considerations, it is important to avoid "ghetto classes" where there is no integration between natives and immigrants as well as to propose extra-scholastic activities (free sport programs, for example) that encourage children to socialize. Segregation in schools with no interaction between natives and immigrants may have a considerable negative effect on immigrants' children. Based on this new evidence, it might prove fruitful to develop policies concerning the integration of children that not only seek to improve their scholastic outputs, but also enable their involvement in social activities allowing for the creation of strong ties with their Italian peers. To enhance the educational (and, consequently, occupational) outcomes of the children of immigrants, it may be important to enhance children's ambitions
and to enable children to think about their future in the same way that natives do.

Finally, based on recent literature on the impact the presence of immigrant students in schools has on educational attainment, I expected to find that a high proportion of immigrants would have been associated with a reduction of the individual aspirations and expectations of natives. My results only partially confirm this statement (true only when looking at long term educational aspirations). Hence, if on the one hand, I can claim that the presence of foreigners represses the desire of academic careers, on the other hand, I observe that it has no association with high school level expectations. As such my results warn against the tendency to define the presence of foreign students as a depressing factor for natives. On the contrary, schools with high levels of integration in terms of interactions among students offer a rich and stimulating environment for natives, despite the relevance of individual social position in determining educational ambition. In order to better understand the reasons behind the reduction in educational aspirations in contexts where the share of immigrants is higher, one must also consider that these areas can be characterized by poorer socioeconomic conditions; settings in which the choice of an academic career may not be considered to be the best one. As I mentioned above, in these areas returns from education can be more favorable for high school diploma holders than for youths with a university degree. As pointed out in the analyses, it would be interesting to look at the same hypotheses using more recent data for schools that have a higher number of foreign students, given that the threshold to see any real effect seems to be fixed at $20 \%$. Despite the strong role of individual characteristics that appeared unexpectedly from the analysis of Italian natives and lead to the confirmation of the persistency of old kind of inequalities, the relevance of the school context is once again confirmed, as well as the need to propose policies that promote activities in schools (e.g. sports and hobbies) that stimulate interactions between peers and the formation of social networks. This is particularly relevant since one of the official and declared aims of middle school in Italy is to increase social interaction among students. Moreover, the goal of middle school is to progressively develop the skills and vocations of students, providing suitable tools for their education and training (Miur). It is therefore necessary to stress once more the importance of successfully integrating natives and children of immigrant students, given that, as I underlined and demonstrated in this thesis, one of the variables associated with high educational ambition is related to friendship networks.

To conclude my thesis, I would like to stress both its academic and empirical strengths. From a scientific point of view, my thesis is relevant because not only do I focus on an extremely important topic, using Italian data for the first time, but I also propose a comparison between two European countries. The analyses presented in the thesis are mostly of a descriptive nature, as I estimated statistical associations without a specific causal interpretation. This is due to the absence of available longitudinal data able to disentangle causal relations among factors. Nevertheless, this study represents one of the first attempts to study the educational expectations of the children of immigrants, comparing results from different countries and analyzing the relevance of school context and family involvement in children's education. Both ITAGEN and PISA2009 data had, up until this point, remained unused for this purpose, providing an opportunity to investigate relevant social aspects.

In my opinion, the real strength of this thesis lies in the empirical applications of the results obtained. My results are useful both on the national and local levels. Policies for the integration of immigrants are one of the 'hot' topics of recent public debate in Italy and in Europe. Making my results available to public policy makers could increase the attractiveness of incentives that lead to the integration of the children of immigrants. My results could guide investments, giving greater importance to not only the distribution of resources but also to the involvement of parents in the educational activities of their children and the creation and support of activities that promote interaction between the children of immigrants and natives.

## Appendix

Table A: Expectations to continue after secondary school, Italy. Subsample including only schools without competitors in recruiting students (PISA2009)

|  | Italy |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Model 1 | Model 2 | Model 3 | Model 4 |
| Migration status Ref. Natives |  |  |  |  |
| Second Generations | 1.11 | 1.09 | 1.08 | 1.08 |
|  | (.220) | (.216) | (.214) | (.213) |
| Pre school | 1.04 | 1.05 | 1.04 | 1.04 |
|  | (.127) | (.128) | (.127) | (.127) |
| Child Immigrants | 1.06 | 1.07 | 1.06 | 1.06 |
|  | (.120) | (.121) | (.120) | (.119) |
| Adolescent immigrants | 1.07 | 1.09 | 1.09 | 1.12 |
|  | (.108) | (.111) | (.110) | (.112) |
| Female | 1.68*** | 1.64*** | 1.63*** | 1.59*** |
|  | (.153) | (.150) | (.148) | (.143) |
| Ses | 1.01*** | 1.01*** | 1.01*** | 1.01*** |
|  | (0.003) | (0.003) | (0.003) | (0.003) |
| Parents' education level Ref. Tertiary <br> education |  |  |  |  |
| Less than secondary | 0.46*** | 0.50*** | 0.50*** | 0.50*** |
|  | (.064) | (.070) | (.070) | (.069) |
| Vocational oriented | .826** | .83** | .84* | .83** |
|  | (0.056) | (0.056) | (0.057) | (0.057) |
| Secondary teoretically based | 0.92* | 0.92* | 0.92* | 0.92* |
|  | (0.034) | (0.035) | (0.035) | (0.034) |
| Math score | 1.01*** | 1.01*** | 1.01*** | 1.01*** |
|  | (0.000) | (0.000) | (0.000) | (0.000) |
| Mixedcouple | 0.86 | . 90 | . 89 | . 89 |
|  | (.138) | (.139) | (.137) | (.136) |
| Isced orientation Ref. general |  |  |  |  |
| Vocational oriented | 0.52*** | 0.54*** | 0.60*** | 0.65*** |
|  | (0.047) | (0.047) | (0.053) | (0.053) |
| Home resources |  |  |  |  |
| Cultural possession |  | 1.23*** | 1.21*** | 1.22*** |
|  |  | (0.065) | (0.065) | (0.065) |
| Home educational resources |  | 1.12*** | 1.12*** | 1.11*** |
|  |  | (0.054) | (0.054) | (0.053) |
| School resources |  |  |  |  |
| Student-teacher ratio |  |  | 1.02 | 1.03 |
|  |  |  | (0.033) | (0.033) |
| Quality of educational resources |  |  | 0.85* | 0.87 |
|  |  |  | (0.066) | (0.063) |
| Teacher shortage |  |  | 0.85 | 0.85 |
|  |  |  | (0.077) | (0.070) |
| Proportion of highqualified teachers |  |  | 3.08*** | 2.54*** |
|  |  |  | (0.886) | (0.680) |
| Parents involvement in school |  |  |  |  |
| Parental expectations towards school Ref. |  |  |  |  |
| Largely absent |  |  |  |  |
| Constant pressure by many parents |  |  |  | 2.19*** |
|  |  |  |  | (0.643) |
| Pressure by minority of parents |  |  |  | 1.24** |


| Parents groups influence budget |  |  |  | $\begin{array}{r} (0.084) \\ 2.25 * * * \end{array}$ |
| :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |
|  |  |  |  | (0.457) |
| Parents groups influence instructional content |  |  |  | 1.04 |
|  |  |  |  | $\begin{array}{r} (0.121) \\ 1.25 * * * \\ (0179) \end{array}$ |
| Parents groups influence assessment |  |  |  |  |
|  |  |  |  |  |
| IL level variance | . 535 | . 485 | . 378 | .266(.06 |
| If level variance | (.104) | (.097) | (.082) | 5) |
| Number of observations | 3492 | 3492 | 3492 | 3492 |
| Number of groups | 140 | 140 | 140 | 140 |
| LR test | 150.02*** | 127.07*** | 90.92*** | 54.09*** |

Table B: Multilevel Logistic random intercept models of educational expectation to continue after secondary school including math scores (PISA2009)

|  | Italy |  |  |  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |


| Cultural possession |  | $\begin{array}{r} 1.26^{* * *} \\ (0.026) \end{array}$ | $\begin{array}{r} 1.26^{* * *} \\ (0.026) \end{array}$ | $\begin{array}{r} 1.26 * * * \\ (0.026) \end{array}$ |  | $\begin{aligned} & 1.09 * * \\ & (0.041) \end{aligned}$ | $\begin{aligned} & 1.09 * * \\ & (0.041) \end{aligned}$ | $\begin{aligned} & 1.08 * * \\ & (0.041) \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Home educational resources |  | $\begin{array}{r} 1.15^{* * *} \\ (0.022) \end{array}$ | $\begin{array}{r} 1.15 * * * \\ (0.022) \end{array}$ | $\begin{array}{r} 1.15^{* * *} \\ (0.022) \end{array}$ |  | $\begin{aligned} & 1.09 * * \\ & (0.042) \end{aligned}$ | $\begin{aligned} & 1.09 * * \\ & (0.042) \end{aligned}$ | $\begin{gathered} 1.09 * * \\ (0.041) \end{gathered}$ |
| School resources |  |  |  |  |  |  |  |  |
| Student-teacher ratio |  |  | $\begin{array}{r} 1.04 * * * \\ (0.011) \end{array}$ | $\begin{array}{r} 1.03 * * * \\ (0.011) \end{array}$ |  |  | $\begin{array}{r} 0.95^{*} \\ (0.021) \end{array}$ | $\begin{array}{r} 0.94 \\ (0.022) \end{array}$ |
| Quality of educational resources |  |  | $\begin{aligned} & 0.93 * * \\ & (0.026) \end{aligned}$ | $\begin{aligned} & 0.93 * * \\ & (0.026) \end{aligned}$ |  |  | $\begin{array}{r} 1.17 * * * \\ (0.060) \end{array}$ | $\begin{aligned} & 1.19 * * * \\ & (0.060) \end{aligned}$ |
| Teacher shortage |  |  | $\begin{array}{r} 0.95 \\ (0.030) \end{array}$ | $\begin{array}{r} 0.95 \\ (0.029) \end{array}$ |  |  | $\begin{array}{r} 0.92 \\ (0.051) \end{array}$ | $\begin{aligned} & 0.95^{* *} \\ & (0.052) \end{aligned}$ |
| Proportion of highqualified teachers |  |  | $\begin{array}{r} 1.39^{* * *} \\ (0.120) \end{array}$ | $\begin{array}{r} 1.40^{* * *} \\ (0.119) \end{array}$ |  |  | $\begin{array}{r} 2.82 * * * \\ (0.962) \end{array}$ | $\begin{gathered} 2.65 * * * \\ (0.891) \end{gathered}$ |
| Parents involvement in school <br> Parental expectations towards school Ref. Largely absent |  |  |  |  |  |  |  |  |
| Constant pressure by many parents |  |  |  | $\begin{array}{r} 1.36 * * * \\ (0.129) \end{array}$ |  |  |  | $\begin{aligned} & 1.38^{* *} \\ & (0.235) \end{aligned}$ |
| Pressure by minority of parents |  |  |  | $\begin{array}{r} 1.040 \\ (0.030) \end{array}$ |  |  |  | $\begin{array}{r} 0.960 \\ (0.051) \end{array}$ |
| Parents groups influence budget |  |  |  | $\begin{array}{r} 1.13^{*} \\ (0.079) \end{array}$ |  |  |  | $\begin{aligned} & 1.32^{* *} \\ & (0.217) \end{aligned}$ |
| Parents groups influence instructional content |  |  |  | $\begin{array}{r} 1.120 \\ (0.081) \end{array}$ |  |  |  | $\begin{array}{r} 1.30 \\ (0.221) \end{array}$ |
| Parents groups influence assessment |  |  |  | $\begin{array}{r} 1.29 * * * \\ (0.109) \\ \hline \end{array}$ |  |  |  | $\begin{array}{r} 1.050 \\ (0.129) \\ \hline \end{array}$ |
| II level variance | .379(.031) | .343(.029) | .323(.028) | .302(.027) | .383(.058) | .376(.057) | .313(.050) | .283(.047) |
| Number of observations | 24302 | 24302 | 24302 | 24302 | 7749 | 7749 | 7749 | 7749 |
| Number of groups | 888 | 888 | 888 | 888 | 261 | 261 | 261 | 261 |
| LR test | 633.19*** | 535.48*** | 490.89*** | 447.62*** | 214.93*** | 210.91*** | 164.34*** | 134.19*** |

Table C: Multilevel logistic random intercept regression models for the expectation to reach the tertiary level of education including math scores (PISA2009)

|  | Italy |  |  | Belgium |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Model 1 | Model 2 | Model 3 | Model 4 | Model 1 | Model 2 | Model 3 | Model 4 |
| Migration status Ref. Natives |  |  |  |  |  |  |  |  |
| Second Generations | $\begin{array}{r} 1.04 \\ (0.112) \end{array}$ | $\begin{array}{r} 0.99 \\ (0.116) \end{array}$ | $\begin{array}{r} 1.07 \\ (0.115) \end{array}$ | $\begin{array}{r} 1.07 \\ (0.115) \end{array}$ | $\begin{aligned} & 1.55 * * \\ & (0.127) \end{aligned}$ | $\begin{aligned} & 1.59 * * \\ & (0.131) \end{aligned}$ | $\begin{aligned} & 1.57 * * \\ & (0.130) \end{aligned}$ | $\begin{aligned} & 1.57 * * \\ & (0.130) \end{aligned}$ |
| Pre school | $\begin{array}{r} 1.14 \\ (0.101) \end{array}$ | $\begin{array}{r} 1.08 \\ (0.104) \end{array}$ | $\begin{gathered} 1.17^{*} \\ (0.104) \end{gathered}$ | $\begin{array}{r} 1.17 * \\ (0.104) \end{array}$ | $\begin{gathered} 1.52 * * * \\ (0.162) \end{gathered}$ | $\begin{array}{r} 1.51^{* * *} \\ (0.162) \end{array}$ | $\begin{array}{r} 1.51 * * * \\ (0.162) \end{array}$ | $\begin{array}{r} 1.50 * * * \\ (0.161) \end{array}$ |
| Child Immigrants | $\begin{array}{r} 1.01 \\ (0.064) \end{array}$ | $\begin{array}{r} 0.98 \\ (0.065) \end{array}$ | $\begin{array}{r} 1.030 \\ (0.065) \end{array}$ | $\begin{array}{r} 1.030 \\ (0.065) \end{array}$ | $\begin{array}{r} 1.70^{* * *} \\ (0.190) \end{array}$ | $\begin{array}{r} 1.70 * * * \\ (0.190) \end{array}$ | $\begin{array}{r} 1.69 * * * \\ (0.189) \end{array}$ | $\begin{array}{r} 1.70 * * * \\ (0.189) \end{array}$ |
| Adolescent immigrants | $\begin{array}{r} 1.02 \\ (0.058) \end{array}$ | $\begin{array}{r} 0.97 \\ (0.060) \end{array}$ | $\begin{array}{r} 1.06 \\ (0.060) \end{array}$ | $\begin{array}{r} 1.06 \\ (0.060) \end{array}$ | $\begin{array}{r} 1.54 * * * \\ (0.118) \end{array}$ | $\begin{aligned} & 1.57 * * * \\ & (0.122) \end{aligned}$ | $\begin{array}{r} 1.58 * * * \\ (0.124) \end{array}$ | $\begin{array}{r} 1.58 * * * \\ (0.123) \end{array}$ |
| Female | $\begin{array}{r} 1.35 * * * \\ (0.063) \end{array}$ | $\begin{array}{r} 1.31 * * * \\ (0.062) \end{array}$ | $\begin{aligned} & 1.32 * * * \\ & (0.062) \end{aligned}$ | $\begin{array}{r} 1.32 * * * \\ (0.062) \end{array}$ | $\begin{aligned} & 1.16^{* *} \\ & (0.086) \end{aligned}$ | $\begin{array}{r} 1.100 \\ (0.083) \end{array}$ | $\begin{array}{r} 1.100 \\ (0.083) \end{array}$ | $\begin{array}{r} 1.110 \\ (0.083) \end{array}$ |
| Ses | $\begin{array}{r} 1.01 * * * \\ (0.002) \end{array}$ | $\begin{array}{r} 1.01 * * * \\ (0.002) \end{array}$ | $\begin{array}{r} 1.01 * * * \\ (0.002) \end{array}$ | $\begin{array}{r} 1.01 * * * \\ (0.002) \end{array}$ | $\begin{array}{r} 1.01 * * * \\ (0.003) \end{array}$ | $\begin{array}{r} 1.01 * * * \\ (0.003) \end{array}$ | $\begin{array}{r} 1.01 * * * \\ (0.003) \end{array}$ | $\begin{array}{r} 1.01 * * * \\ (0.003) \end{array}$ |
| Parents' education level Ref. Tertiary education |  |  |  |  |  |  |  |  |
| Less than secondary | $\begin{gathered} 0.72 * * * \\ (0.057) \end{gathered}$ | $\begin{array}{r} 0.78 * * * \\ (0.061) \end{array}$ | $\begin{gathered} 0.77 * * * \\ (0.061) \end{gathered}$ | $\begin{array}{r} 0.77 * * * \\ (0.061) \end{array}$ | $\begin{gathered} 0.50 * * * \\ (0.102) \end{gathered}$ | $\begin{array}{r} 0.56 * * * \\ (0.115) \end{array}$ | $\begin{gathered} 0.56 * * * \\ (0.116) \end{gathered}$ | $\begin{gathered} 0.57 * * * \\ (0.117) \end{gathered}$ |
| Vocational oriented | $\begin{gathered} 0.84 * * * \\ (0.032) \end{gathered}$ | $\begin{array}{r} 0.85 * * * \\ (0.032) \end{array}$ | $\begin{gathered} 0.85 * * * \\ (0.032) \end{gathered}$ | $\begin{gathered} 0.85 * * * \\ (0.032) \end{gathered}$ | $\begin{array}{r} 0.63 * * * \\ (0.028) \end{array}$ | $\begin{array}{r} 0.65 * * * \\ (0.029) \end{array}$ | $\begin{gathered} 0.65 * * * \\ (0.029) \end{gathered}$ | $\begin{gathered} 0.65 * * * \\ (0.029) \end{gathered}$ |
| Secondary teoretically based | $\begin{array}{r} 0.96 \\ (0.019) \end{array}$ | $\begin{array}{r} 0.97 \\ (0.019) \end{array}$ | $\begin{array}{r} 0.97 \\ (0.019) \end{array}$ | $\begin{array}{r} 0.97 \\ (0.019) \end{array}$ | $\begin{gathered} 0.77 * * * \\ (0.025) \end{gathered}$ | $\begin{array}{r} 0.79 * * * \\ (0.026) \end{array}$ | $\begin{gathered} 0.79 * * * \\ (0.026) \end{gathered}$ | $\begin{array}{r} 0.79 * * * \\ (0.026) \end{array}$ |
| Math score | $\begin{array}{r} 1.00 * * * \\ (0.000) \end{array}$ | $\begin{array}{r} 1.00^{* * *} \\ (0.000) \end{array}$ | $\begin{aligned} & 1.00 * * * \\ & (0.000) \end{aligned}$ | $\begin{array}{r} 1.00^{* * *} \\ (0.000) \end{array}$ | $\begin{array}{r} 1.01 * * * \\ (0.001) \end{array}$ | $\begin{array}{r} 1.01 * * * \\ (0.001) \end{array}$ | $\begin{array}{r} 1.01 * * * \\ (0.001) \end{array}$ | $\begin{array}{r} 1.01 * * * \\ (0.001) \end{array}$ |
| Mixedcouple | $\begin{array}{r} 1.010 \\ (0.084) \end{array}$ | $\begin{array}{r} 1.010 \\ (0.086) \end{array}$ | $\begin{array}{r} 1.020 \\ (0.086) \end{array}$ | $\begin{array}{r} 1.060 \\ (0.086) \end{array}$ | $\begin{aligned} & 1.64 * * \\ & (0.188) \end{aligned}$ | $\begin{array}{r} 1.67 * * * \\ (0.192) \end{array}$ | $\begin{array}{r} 1.64 * * * \\ (0.188) \end{array}$ | $\begin{array}{r} 1.63 * * * \\ (0.189) \end{array}$ |
| Isced orientation Ref. General |  |  |  |  |  |  |  |  |
| Vocational oriente | (0.013) | $(0.013)$ | (0.017) | (0.018) | $(0.020)$ | (0.020) | $(0.024)$ | $(0.025)$ |
| Home resources |  |  |  |  |  |  |  |  |


| Cultural possession |  | 1.20*** | 1.19*** | 1.19*** |  | 1.25*** | 1.25*** | 1.25*** |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | (0.036) | (0.036) | (0.036) |  | (0.054) | (0.053) | (0.053) |
| Home educational resources |  | 1.14*** | 1.14*** | 1.14*** |  | 1.14*** | 1.15*** | 1.14*** |
|  |  | (0.031) | (0.031) | (0.031) |  | (0.056) | (0.057) | (0.057) |
| School resources |  |  |  |  |  |  |  |  |
| Student-teacher ratio |  |  | 1.05*** | 1.04*** |  |  | 1.04* | 1.03 |
|  |  |  | (0.013) | (0.013) |  |  | (0.023) | (0.023) |
| Quality of educational resources |  |  | 0.99 | 0.99 |  |  | 0.91* | 0.92* |
|  |  |  | (0.030) | (0.030) |  |  | (0.046) | (0.047) |
| Teacher shortage |  |  | 1.02 | 1.02 |  |  | 1.07 | 1.080 |
|  |  |  | (0.034) | (0.034) |  |  | (0.057) | (0.058) |
| Proportion of highqualified teachers |  |  | 1.10 | 1.10 |  |  | 1.19 | 1.27 |
|  |  |  | (0.100) | (0.099) |  |  | (0.400) | (0.429) |
| Parents involvement in school |  |  |  |  |  |  |  |  |
| Parental expectations towards school Ref. Largely absent |  |  |  |  |  |  |  |  |
| Constant pressure by many parents |  |  |  | 0.90 |  |  |  | 1.11 |
|  |  |  |  | (0.106) |  |  |  | (0.140) |
| Pressure by minority of parents |  |  |  | 1.07 |  |  |  | 0.94 |
|  |  |  |  | (0.033) |  |  |  | (0.164) |
| Parents groups influence budget |  |  |  | 0.85 |  |  |  | 0.92 |
|  |  |  |  | (0.066) |  |  |  | (0.111) |
| Parents groups influence instructional content |  |  |  | 1.08 |  |  |  | 1.00 |
|  |  |  |  | (0.083) |  |  |  | (0.166) |
| Parents groups influence assessment |  |  |  | 1.01 |  |  |  | 0.91 |
|  |  |  |  | (0.077) |  |  |  | (0.049) |
| II level variance | .235(.032) | .226(.031) | .209(.030) | .204(.030) | .200(.050) | .199(.051) | .185(.049) | .179(.048) |
| Number of observations | 13,721 | 13,721 | 13,721 | 13,721 | 5,491 | 5,491 | 5,491 | 5,491 |
| Number of groups | 863 | 863 | 863 | 863 | 259 | 259 | 259 | 259 |
| LR test | 121.65*** | 113.67*** | 99.03*** | 94.39*** | 39.70*** | 37.53*** | 33.21*** | $32.23 * * *$ |

Table D. Logistic regression models: short-term educational expectations of children of immigrants (data: ITAGEN) Ref. Low expectations

|  | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 | Model 6 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Migration status |  |  |  |  |  |  |
| Ref. Second Generation |  |  |  |  |  |  |
| Preschool migrants | 0.65** | 0.65 | 0.66** | 0.65** | 0.66** | 0.65** |
|  | (.108) | (.106) | (.109) | (.106) | (.110) | (.108) |
| Recent migrants | 0.54*** | 0.53*** | 0.56*** | 0.54*** | 0.54*** | 0.55*** |
|  | (.065) | (.063) | (.071) | (.063) | (.065) | (.066) |
| Sex |  |  |  |  |  |  |
| Female | 2.70*** | 2.70*** | 2.76*** | 2.72*** | 2.64*** | 2.71*** |
|  | (.292) | (.291) | (.299) | (.292) | (.289) | (.292) |
| Zone of residence Ref. North |  |  |  |  |  |  |
| Centre | 1.11 | 1.10 | 1.10 | 1.09 | 1.09 | 1.08 |
|  | (.116) | (.113) | (.115) | (.114) | (.115) | (.113) |
| South | 2.11*** | 2.09*** | 2.11*** | 2.09*** | 2.17*** | 2.07*** |
|  | (.491) | (.487) | (.499) | (.491) | (.520) | (.479) |
| Socioeconomic status | 1.02*** | 1.03*** | 1.02*** | 1.02*** | 1.02*** | 1.03*** |
|  | (.004) | (.004) | (.004) | (.004) | (.004) | (.004) |
| Parents' education level Ref. High |  |  |  |  |  |  |
| Medium | 0.76** | 0.76** | 0.76** | 0.76** | 0.75** | 0.76** |
|  | (.085) | (.084) | (.085) | (.084) | (.086) | (.084) |
| Low | 0.47*** | 0.47*** | 0.47*** | 0.47*** | 0.46*** | 0.48*** |
|  | (.065) | (.064) | (.065) | (.065) | (.063) | (.065) |
| Unknown | 0.44*** | 0.44*** | 0.45*** | 0.44*** | 0.44*** | 0.45*** |
|  | (.064) | (.064) | (.066) | (.064) | (.064) | (.065) |
| Number of siblings Ref. 0 |  |  |  |  |  |  |
| 1 | 0.66** | 0.66** | 0.65** | 0.66** | 0.65** | 0.65** |
|  | (.108) | (.109) | (.106) | (.109) | (.107) | (.107) |
| 2 | 0.58*** | 0.58*** | 0.58*** | 0.59*** | 0.58*** | 0.57*** |
|  | (.100) | (.100) | (.099) | (.100) | (.101) | (.098) |
| 3 | 0.40*** | 0.40*** | 0.40*** | 0.40*** | 0.40*** | 0.40*** |
|  | (.095) | (.096) | (.097) | (.096) | (.096) | (.095) |
| More than 3 | 0.45*** | 0.45*** | 0.45*** | 0.45*** | 0.45*** | 0.45*** |
|  | (.082) | (.082) | (.083) | (.082) | (.082) | (.082) |
| Having Italian friends |  |  |  |  |  |  |
| Yes | 1.37 |  |  |  |  |  |
|  | (.309) |  |  |  |  |  |
| Having immigrant friends |  |  |  |  |  |  |
| Yes |  | 0.83 |  |  |  |  |
|  |  | (.149) |  |  |  |  |

Having Italian and immigrant
friends

Ref. same number
More Italians 1.19

More immigrants 0.82
(.121)

Meeting Italian friends out of school
Ref. rarely/never
Often/Always 1.05
(.056)

Meeting migrant friends out of school
Ref. rarely/never
Often/Always
0.88**
(.045)

Importance of friends
Ref. friends are not important
Friends are important $1.18^{* * *}$
(.058)

Table E. Logistic regression models: long-term educational aspirations of children of immigrants (data: ITAGEN) Ref. Low aspirations

|  | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 | Model 6 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Migration status |  |  |  |  |  |  |
| Ref. Second generation |  |  |  |  |  |  |
| Preschool immigrants | 1.07 | 1.07 | 1.08 | 1.07 | 1.07 | 1.09 |
|  | (.152) | (.150) | (.155) | (.149) | (.152) | (.153) |
| Recent immigrants | 1.06 | 1.03 | 1.07 | 1.05 | 1.04 | 1.08 |
|  | (.102) | (.100) | (.104) | (.101) | (.101) | (.103) |
| Sex |  |  |  |  |  |  |
| Female | 1.91*** | 1.90*** | 1.93*** | 1.92*** | 1.89*** | 1.92 *** |
|  | (.180) | (.179) | (.186) | (.179) | (.178) | (.180) |
| Zone of residence |  |  |  |  |  |  |
| Ref. North |  |  |  |  |  |  |
| Centre | 1.10 | 1.07 | 1.07 | 1.07 | 1.07 | 1.05 |
|  | (.105) | (.102) | (.103) | (.102) | (.102) | (.101) |
| South | 1.78*** | 1.78*** | 1.76*** | 1.76*** | 1.77*** | 1.73*** |
|  | (.370) | (.367) | (.371) | (.365) | (.372) | (.365) |
| Socioeconomic status | 1.02*** | 1.02*** | 1.02*** | 1.02*** | 1.02*** | 1.02*** |
|  | (.004) | (.004) | (.004) | (.004) | (.004) | (.004) |
| Parents' education level |  |  |  |  |  |  |
| Ref. High |  |  |  |  |  |  |
| Medium | 0.57*** | 0.56*** | 0.57*** | 0.57*** | 0.57*** | 0.57*** |
|  | (.063) | (.062) | (.063) | (.062) | (.063) | (.063) |
| Low | 0.33*** | 0.33*** | 0.33*** | 0.33*** | 0.33*** | 0.34*** |
|  |  | (.046) | (.046) | (.046) | (.046) | (.047) |


| Unknown | $\begin{aligned} & 0.34 * * * \\ & (.044) \end{aligned}$ | $\begin{aligned} & 0.33 * * * \\ & (.043) \end{aligned}$ | $\begin{aligned} & 0.34 * * * \\ & (.045) \end{aligned}$ | $\begin{aligned} & 0.34 * * * \\ & (.044) \end{aligned}$ | $\begin{aligned} & 0.34 * * * \\ & (.043) \end{aligned}$ | $\begin{aligned} & 0.34 * * * \\ & (.044) \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Number of siblings |  |  |  |  |  |  |
| Ref. 0 |  |  |  |  |  |  |
| 1 | $\begin{aligned} & 0.57 * * * \\ & (.107) \end{aligned}$ | $\begin{aligned} & 0.56 * * * \\ & (.109) \end{aligned}$ | $\begin{aligned} & 0.56 * * * \\ & (.108) \end{aligned}$ | $\begin{aligned} & 0.57 * * * \\ & (.110) \end{aligned}$ | $\begin{aligned} & 0.57 * * * \\ & (.109) \end{aligned}$ | $\begin{aligned} & 0.56 * * * \\ & (.108) \end{aligned}$ |
| 2 | $\begin{aligned} & 0.59 * * * \\ & (.110) \end{aligned}$ | $\begin{aligned} & 0.58^{* * *} \\ & (.113) \end{aligned}$ | $\begin{aligned} & 0.59 * * * \\ & (.112) \end{aligned}$ | $\begin{aligned} & 0.59 * * * \\ & (.112) \end{aligned}$ | $\begin{aligned} & 0.59 * * * \\ & (.112) \end{aligned}$ | $\begin{aligned} & 0.57 * * * \\ & (.110) \end{aligned}$ |
| 3 | $\begin{aligned} & 0.56 * * * \\ & (.130) \end{aligned}$ | $\begin{aligned} & 0.57 * * * \\ & (.132) \end{aligned}$ | $\begin{aligned} & 0.57 * * * \\ & (.135) \end{aligned}$ | $\begin{aligned} & 0.57 * * * \\ & (.132) \end{aligned}$ | $\begin{aligned} & 0.57 * * * \\ & (.132) \end{aligned}$ | $\begin{aligned} & 0.55^{* * *} \\ & (.129) \end{aligned}$ |
| More than 3 | $\begin{aligned} & 0.47 * * * \\ & (.129) \end{aligned}$ | $\begin{aligned} & 0.46 * * * \\ & (.126) \end{aligned}$ | $\begin{aligned} & 0.47 * * * \\ & (.131) \end{aligned}$ | $\begin{aligned} & 0.47 * * * \\ & (.129) \end{aligned}$ | $\begin{aligned} & 0.47 * * * \\ & (.129) \end{aligned}$ | $\begin{aligned} & 0.47 * * * \\ & (.132) \end{aligned}$ |
| Having Italian friends |  |  |  |  |  |  |
| Yes | $\begin{aligned} & 1.54^{*} * \\ & (.364) \end{aligned}$ |  |  |  |  |  |
| Having immigrant friends |  |  |  |  |  |  |
| Yes |  | $\begin{aligned} & 1.26 \\ & (.238) \end{aligned}$ |  |  |  |  |
| Having Italian and immigrant friends |  |  |  |  |  |  |
| Ref. same number |  |  |  |  |  |  |
| More Italians |  |  | $\begin{aligned} & 1.21^{*} \\ & (.158) \end{aligned}$ |  |  |  |
| More immigrants |  |  | $\begin{aligned} & 0.97 \\ & (.125) \end{aligned}$ |  |  |  |
| Meeting Italian friends out of school |  |  |  |  |  |  |
| Ref. rarely/never |  |  |  |  |  |  |
| Often/Always |  |  |  | $\begin{aligned} & 1.03 \\ & (.053) \end{aligned}$ |  |  |
| Meeting immigrant friends out of school |  |  |  |  |  |  |
| Often/Always |  |  |  |  | $\begin{aligned} & 0.98 \\ & (.044) \end{aligned}$ |  |
| Importance of friends <br> Ref. friends are not important |  |  |  |  |  |  |
| Friends are important |  |  |  |  |  | $\begin{aligned} & 1.20^{* * *} \\ & (.056) \\ & \hline \end{aligned}$ |

Table F. Logistic regression models: short-term educational expectations of Italian students (data: ITAGEN) Ref. Low expectations

| Sex Female | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | 3.34*** | 3.36 *** | 3.38*** | $3.37 * * *$ | 3.40 *** |
|  | (.424) | (.424) | (.421) | (.420) | (.432) |
| Zone of residence Ref. North |  |  |  |  |  |
| Centre | 1.16 | 1.15 | 1.14 | 1.15 | 1.17 |
|  | (.123) | (.123) | (.123) | (.124) | (.124) |
| South | 1.70*** | 1.69*** | 1.68*** | 1.69*** | 1.72*** |
|  | (.267) | (.267) | (.263) | (.267) | (.273) |
| Socioeconomic status | 1.04*** | 1.04*** | 1.04*** | 1.04*** | 1.04*** |
|  | (.003) | (.003) | (.003) | (.003) | (.004) |
| Age | 0.44*** | 0.43*** | 0.45*** | 0.44*** | 0.45 *** |
|  | (.056) | (.058) | (.058) | (.056) | (.058) |
| Parents' education level Ref. High |  |  |  |  |  |
| Medium | 0.51** | 0.51** | 0.51** | 0.51** | 0.51** |
|  | (.053) | (.054) | (.053) | (.053) | (.053) |
| Low | 0.29*** | 0.28*** | 0.28*** | 0.28*** | 0.28*** |
|  | (.038) | (.038) | (.038) | (.038) | (.038) |
| Unknown | 0.35*** | 0.35*** | 0.35*** | 0.35*** | 0.35*** |
|  | (.058) | (.058) | (.059) | (.058) | (.059) |
| Number of siblings Ref. 0 |  |  |  |  |  |
| 1 | 0.82 | 0.82 | 0.82 | 0.82 | 0.83 |
|  | (.110) | (.110) | (.109) | (.110) | (.111) |
| 2 | 0.75 | 0.75 | 0.75 | 0.75 | 0.76 |
|  | (.117) | (.116) | (.117) | (.117) | (.120) |
| 3 | 0.95 | 0.95 | 0.95 | 0.95 | 0.97 |
|  | (.195) | (.195) | (.196) | (.197) | (.201) |
| More than 3 | 0.59* | 0.59* | 0.60* | 0.59* | 0.60* |
|  | (.167) | (.163) | (.169) | (.167) | (.171) |
| Having immigrant friends |  |  |  |  |  |
| Yes | 0.88 |  |  |  |  |
|  | (.140) |  |  |  |  |
| Having Italian and immigrant friends |  |  |  |  |  |
| Ref. same number |  |  |  |  |  |
| More Italians |  | 1.15 |  |  |  |
|  |  | (.177) |  |  |  |
| More immigrants |  | 0.91 |  |  |  |
|  |  | (.672) |  |  |  |

Meeting Italian friends out of school

| Ref. rarely/never |  |
| :--- | :--- |
| Often/Always | $1.13^{* *}$ |
|  | $(.073)$ |

Meeting migrant friends out of school
Ref. rarely/never
Often/Always 1.03

Importance of friends
Ref. friends are not important
Friends are important $1.14^{* * *}$

Notes: Analyses are weighted, clustered and presented as odds ratios. Significance: $* * *<0.01 * *<0.05 *<0.1$

Table G. Logistic regression models: long-term educational aspirations of Italian students (data: ITAGEN)
Ref. Low aspirations

|  | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Sex: Female | $\begin{aligned} & \hline 1.87 * * * \\ & (.167) \end{aligned}$ | $\begin{aligned} & \hline 1.89 * * * \\ & (.172) \end{aligned}$ | $\begin{aligned} & \hline 1.89^{* * *} \\ & (.171) \end{aligned}$ | $\begin{aligned} & 1.91^{* * *} \\ & (.171) \end{aligned}$ | $\begin{aligned} & \hline 1.93 * * * \\ & (.174) \end{aligned}$ |
| Ref. North |  |  |  |  |  |
| Centre | $\begin{aligned} & 1.13 \\ & (.118) \end{aligned}$ | $\begin{aligned} & 1.11 \\ & (.116) \end{aligned}$ | $\begin{aligned} & 1.11 \\ & (.117) \end{aligned}$ | $\begin{aligned} & 1.10 \\ & (.114) \end{aligned}$ | $\begin{aligned} & 1.14 \\ & (.118) \end{aligned}$ |
| South | $\begin{aligned} & 1.71 * * * \\ & (.270) \end{aligned}$ | $\begin{aligned} & 1.68^{* * *} \\ & (.266) \end{aligned}$ | $\begin{aligned} & 1.68^{* * *} \\ & (.267) \end{aligned}$ | $\begin{aligned} & 1.68^{* * *} \\ & (.268) \end{aligned}$ | $\begin{aligned} & 1.73 * * * \\ & (.281) \end{aligned}$ |
| Socioeconomic status | $\begin{aligned} & 1.03 * * * \\ & (.003) \end{aligned}$ | $\begin{aligned} & 1.03 * * * \\ & (.003) \end{aligned}$ | $\begin{aligned} & 1.03 * * * \\ & (.003) \end{aligned}$ | $\begin{aligned} & 1.03^{* * *} \\ & (.003) \end{aligned}$ | $\begin{aligned} & 1.03 * * * \\ & (.003) \end{aligned}$ |
| Age | $\begin{aligned} & 46 * * * \\ & (.071) \end{aligned}$ | $\begin{aligned} & 47 * * * \\ & (.072) \end{aligned}$ | $\begin{aligned} & 47 * * * \\ & (.070) \end{aligned}$ | $\begin{aligned} & 47 * * * \\ & (.071) \end{aligned}$ | $\begin{aligned} & 48 * * * \\ & (.074) \end{aligned}$ |
| Ref. High |  |  |  |  |  |
| Medium | $\begin{aligned} & 44^{* * *} \\ & (.046) \end{aligned}$ | $\begin{aligned} & 44^{* * *} \\ & (.046) \end{aligned}$ | $\begin{aligned} & 44^{* * *} \\ & (.046) \end{aligned}$ | $\begin{aligned} & 44 * * * \\ & (.046) \end{aligned}$ | $\begin{aligned} & 44^{* * *} \\ & (.046) \end{aligned}$ |
| Low | $\begin{aligned} & 0.25 * * * \\ & (.035) \end{aligned}$ | $\begin{aligned} & 0.25 * * * \\ & (.034) \end{aligned}$ | $\begin{aligned} & 0.25 * * * \\ & (.034) \end{aligned}$ | $\begin{aligned} & 0.25 * * * \\ & (.034) \end{aligned}$ | $\begin{aligned} & 0.24 * * * \\ & (.033) \end{aligned}$ |
| Unknown | $\begin{aligned} & 0.20^{* * *} \\ & (.036) \end{aligned}$ | $\begin{aligned} & 0.21^{* * *} \\ & (.036) \end{aligned}$ | $\begin{aligned} & 0.21^{* * *} \\ & (.036) \end{aligned}$ | $\begin{aligned} & 0.21 * * * \\ & (.036) \end{aligned}$ | $\begin{aligned} & 0.21^{* * *} \\ & (.036) \end{aligned}$ |
| Number of siblings |  |  |  |  |  |
| 1 | $\begin{aligned} & 0.77 \\ & (.109) \end{aligned}$ | $\begin{aligned} & 0.78 \\ & (.108) \end{aligned}$ | $\begin{aligned} & 0.78 \\ & (.109) \end{aligned}$ | $\begin{aligned} & 0.78 \\ & (.109) \end{aligned}$ | $\begin{aligned} & 0.80 \\ & (.112) \end{aligned}$ |
| 2 | $\begin{aligned} & 0.64 * * * \\ & (.095) \end{aligned}$ | $\begin{aligned} & 0.64 * * * \\ & (.096) \end{aligned}$ | $\begin{aligned} & 0.64 * * * \\ & (.096) \end{aligned}$ | $\begin{aligned} & 0.64 * * * \\ & (.096) \end{aligned}$ | $\begin{aligned} & 0.66^{* * *} \\ & (.100) \end{aligned}$ |
| 3 | $\begin{aligned} & 0.77 \\ & (.169) \end{aligned}$ | $\begin{aligned} & 0.77 \\ & (.171) \end{aligned}$ | $\begin{aligned} & 0.78 \\ & (.172) \end{aligned}$ | $\begin{aligned} & 0.78 \\ & (.176) \end{aligned}$ | $\begin{aligned} & 0.80 \\ & (.180) \end{aligned}$ |
| More than 3 | 0.62** | 0.62** | 0.62** | 0.62** | 0.63** |



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[^0]:    * estimate. Source: MIUR Gli alunni stranieri nel sistema scolastico italiano 2008

[^1]:    Notes: ${ }^{* * *<0.01 * *<0.05 *<0.1 ~ A n a l y s e s ~ a r e ~ w e i g h t e d, ~ a n d ~ p r e s e n t e d ~ a s ~ o d d s ~ r a t i o s . ~}$

