

## RESEARCH ARTICLES

### Educational Attainment of Second Generation Immigrants<sup>1</sup>

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**Abstract.** This paper aims to study the determinants of the educational gap between children of immigrants and natives. In particular, by comparing the performances of the first and second generation of immigrants with natives we aim to verify if there is a specific effect related to the generation status. Thus we control our dataset for the most common determinants of school performance and verify (as residual) to what extent generation status exerts an independent effect on early school performance net of economic resources, cultural capital background, pupils' aspirations and ethnic school segregation. We analyze and compare the cases of three countries, which mainly correspond to three different stages of immigration of developed European economies. We confirm the importance of the traditional determinants. In Italy, the gap mainly depends on school-segregation dynamics and socioeconomic differences, but the second-generation status is also per se a determinant. In France, the second-generation status has no additional effect and school segregation dynamics are the most important factor in explaining the gap. On the contrary, in Germany, the traditional determinants are not able to fully explain the raw disadvantages of second generations; here, the main determinants in reducing the observed gap are cultural-capital background and language skills.

**Keywords:** *educational attainment, second-generation immigrants, international comparison*

#### 1. Introduction

The integration of migrants from all parts of the world into the host society has become one of the greatest challenges of highly developed countries. An important role in the integration process is played by the educational system as, e.g., human capital accumulation is considered a fundamental precondition for the integration of migrants by representing the point of departure for labour market

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success.

Education in fact has long been considered as a way of social advancement for immigrant families. For the majority of migrants who come to a new country with low skills, without an established family business, an accumulated wealth and long-standing local social networks, the education system represents a unique opportunity for social mobility with respect to the next generation (Brinbaum, Heath, 2007). Success in the education system would allow their children to obtain higher paying and higher status jobs with a contemporaneous rise in the family's social standing.

The literature uses educational attainment to capture progression in the human capital accumulation up national education systems. By comparing the students' performances emerges that, notwithstanding the strong incentives, in industrialized countries immigrants' children do not perform as well as others students (Marks, 2005). This problem becomes particularly relevant when we consider the trajectories of the second generation of immigrants, who were born, socialized and educated in the host country and thus who are supposed to share the same opportunities within the same social context of natives. This issue is particularly related to the so-called "new second generation," the children of recent migrants who came to Europe and North America in the second half of the 20th century, who are now completing their education and entering the labour market. They represent, in fact, a crucial challenge for social cohesion in western societies: "Will they experience an upward mobility by reducing the existent gap with their native counterparts or, at the contrary, will they reproduce the social stratification in terms of integration in the subaltern positions in the society as their parents?" (Meurs, Pailhe, Simon, 2006).

Literature highlights several factors in explaining the educational gap between children of immigrants and natives. Along this line, the aim of this paper is to study the determinants of this educational gap and, in particular, by comparing the performances of the first and second generation of immigrants with natives we aim to verify if there is a specific effect related to the generation status. Thus we control our dataset for the most common determinants of school performance and verify (as residual) to what extent generation status exerts an independent effect on early school performance both conditional and unconditional economic resources, cultural capital background, pupils' aspirations and school segregation dynamics.

As the integration process, as well as the related problems and policies, may be strongly affected by its nature, e.g. the problems of early immigration countries are rather different from those arising in countries with a consolidated story of immigration, we analyze and compare the cases of three countries (France, Germany and Italy). We chose them since they broadly correspond to three different stages of immigration of developed economies. France may represent the case of the countries with a strong colonial history; Germany can be associated to countries with post-war labour recruitment; and Italy is a typical case of new countries of immigration. On this respect our study is particularly relevant for policymakers as our cases together fully represent the development of the immigration process and integration. In particular, we aim to verify if the different stage plays any role in the educational gap by comparing the cases of the three observed European countries.

The rest of the paper is structured as follows. Section 2 focuses on the main literature on the determinants of immigrants' children educational gap; section 3 deals with the research hypothesis, the dataset and the methodology adopted; section 4 presents the main results; section 5 concludes.

## **2. The determinants of the educational gap: literature review**

In order to assess the educational attainment two kinds of measures are normally adopted: a) test scores, which directly deal with the scholastic performances; b) educational outcomes, which represent the continuation rates into upper secondary and tertiary education when the compulsory school is concluded and students can choose whether or not to continue or to enter the labour market. Scholars argue that the determinants of the educational gap of the immigrants' children may differ or play a different role whether educational attainment is measured by test scores or continuations rates. Since in our project we measure the educational performance of pupils in terms of the former, the following part is mainly dedicated to their peculiar determinants even if continuation rates will be also discussed.

In analyzing the educational gap between natives and children of immigrants, sociologists of education have tended to focus on class inequalities by developing two broad families of explanations: the "structural" and the "cultural" one respectively. Their common feature relies on the Bourdieu and Passeron's

(1970; 1990 [1997]) cultural and social reproduction theory, which assesses that the unequal distribution of power resources (social, cultural and economic capital) between classes are transmitted over generations.

The “structural explanations” thus argue that the weaker performance of immigrants’ children is largely due to socio-economic factors (mainly indexed by parental occupation). On the one hand, these factors are directly connected with continuation rates, since inequalities in material resources make more costly for children from working-class origin continuing in education beyond the period of compulsory school (Brinbaum, Heath, 2007); on the other hand it is also reasonable to link the parents’ economic conditions and the lack of material resources to test scores’ performance.

The “cultural explanations” instead consider cultural capital as the most important form of capital for children at school. In its most general form, cultural capital consists of familiarity with the dominant culture in society, dominant culture which corresponds to the culture found at school. Like many forms of capital, cultural capital is inherited by children from their parents. Thus, according to this theory, the weaker performance of immigrants’ children can be related to their weakest cultural capital background. It can be indexed by several proxies, i.e. the educational level of parents, but also their familiarity with the hosting culture, as well as parental skills in helping children with their schoolwork (and thus the importance of language skills) and knowledge about how to deal with the educational system (Van de Werfhorst, Hofstede, 2007). The negative effect of this cultural dissonance showed by immigrants’ children is also called by sociologists the *primary effect* of stratification on educational attainment measured by test scores<sup>2</sup>.

Starting from these “traditional” explanations other kind of theories were developed emphasizing the role of decision-making process. Among others, Breen and Goldthorpe (1997) and Goldthorpe (1996) provide the relative risk aversion theory, which assesses that according to the mechanism of relative risk aversion, the primary goal for each member of the society is to avoid downward social

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<sup>2</sup> There is also another dynamics related to stratification, called the *secondary effect*. Stratification may be an advantage (instead of a disadvantage) when continuation rates’ measures are considered. In fact, many immigrant groups are positively selected for their ambitions and high aspirations and this may likely bring to ambitious choices of their children in continuing the school after the compulsory period.

mobility with respect to their parents' trajectories. While this determinant is surely related with continuation rates, including it as explanatory factor of educational achievement measured by test scores is a controversial issue. In fact, if children wish to avoid downward mobility they will probably continue higher schools, but at the same time they do not automatically turned into better learners. Some scholars identify this issue as an "issue of causality" between school performance and mobility concerns and conclude that mobility concerns are a consequence of school performance and not the contrary (Van de Werfhorst, Hofstede, 2007). In other words, they state that badly performing students get more concerned about class maintenance as a result of their performance and not that the anxiety in mobility concerns can cause negative effects on performance.

Another kind of explanation focuses on schools characteristics. In most countries ethnic minorities are often concentrated in particular areas, typically economically disadvantaged, so that in local schools there are high proportions of immigrants' children. As a matter of fact, these deprived neighborhoods are often associated with poorer schooling, characterized by difficulties in attracting and retaining suitable teachers (higher teacher turnover) or by parents who have less time and resources to contribute to the school. Many scholars (Rumberger, Willms, 1992; Portes, MacLeod, 1996; Wang, Goldschmidt, 1999) found evidence of the strong association between school segregation and the weaker performance of ethnic minorities.

### **3. Research hypothesis, data and methods**

As shown in the previous section, researchers have highlighted several factors in explaining the gap between children of immigrants and natives. Along this line, our research addresses one basic question: "to what extent does generation status exert an independent effect on early school performance net of economic resources, cultural capital background, pupils' aspirations and ethnic school segregation dynamics?" In other words, we suppose that each of these determinants plays an important role in explaining the educational gap between immigrants' children and natives; further, we are interested at looking if a residual differentiation is still found after controlling for these traditional explanatory factors.

Data have been taken from the OECD Program for International Students

Assessment (PISA, 2006), a triennial survey of the educational attainment of 15 years old students, which consists of a sample of more than 400.000 students from 57 countries. The focus of PISA 2006 is on science topics, but the assessment also includes mathematics and reading. Moreover, three questionnaires are provided, aimed to collect data on students, parents and institutional factors that could explain differences in performance.

Our sample is composed by more than 30.000 observations (69,8% Italy; 15,2% Germany; 15,0% France). Any comparison of the three countries patterns with respect to the contextual average is made with those European countries, which have a minimum of 3% of immigrant students on the total scholastic population (16 countries).

For our purposes, we divided immigrants' children in:

a) first-generation pupils, who were born outside the receiving country and whose parents were also born in a different country;

b) second-generation pupils, who were born in the receiving country but whose parents were born in a different country. In this sub-group we include also pupils who were born outside the receiving country and who are emigrated in the pre-scholar age, the so-called 1.5 generation. The inclusion of these pupils is justified by the fact that both the second and the 1.5 generation of pupils share the unique position of having experienced the whole period of "secondary socialization" in the receiving country<sup>3</sup>.

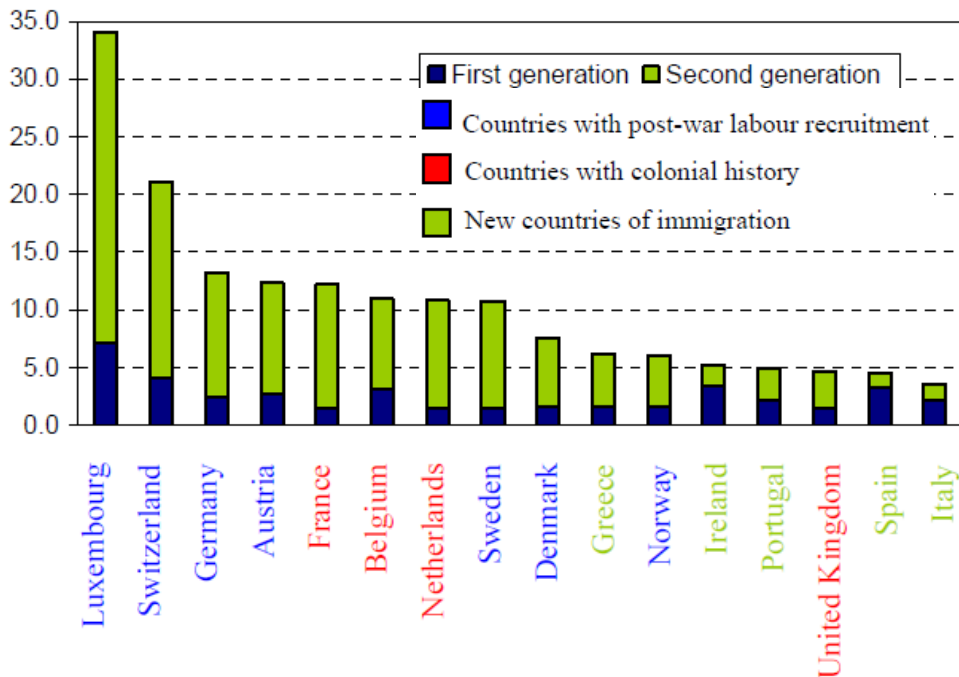
As we mentioned before, comparing the performances differences between the first and the second generation of pupils with natives may give some insight into the effectiveness of countries' school systems in developing immigrants' children scholastic skills. First generation pupils typically spent only part of their schooling in the receiving country and may have had very different schooling experiences before they arrived there. The level of achievement they have reached at age 15 can therefore only partly attributed to the school system of the receiving country. Their relative performance may serve as a rough baseline for the potential immigrants' children bring with them when they enter the different

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<sup>3</sup> Sociologists identify the "primary socialization" as the socialization children experience in the first years of their life, during which the family assumes a fundamental role. Further, in the "secondary socialization", other social agents assume relevance, which often impose very different values from those elaborated during the primary socialization. In particular, in the secondary socialization the school assumes the most important role in driving the choices and the attitudes of children.

receiving countries. In contrast, the achievement of the second-generation pupils is largely determined by the receiving country’s school system (although it will also be affected by the student’s background) and, thus it is supposed to be close to the natives’ one. The gap in performance between first-generation and second-generation pupils may indicate the extent to which the different school systems succeed in supporting immigrant pupils’ learning (OECD, 2006). As expected, the presence of second-generation immigrants is higher in the European countries with a long history of immigration, while the first one is mostly represented in the new countries of immigration.

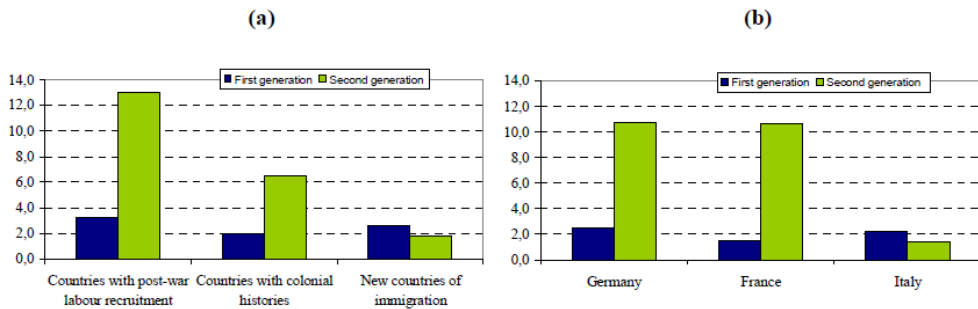
**Figure 1 - Proportions of immigrants’ children on the scholastic population by generation status and receiving country (European countries with at least 3% of children of immigrants).**



Source: PISA, 2006

By comparing figure 2a and 2b we can see as the distribution of the two generations in each country show nearly similar proportions to its reference group (respectively European countries with colonial history for France, post-war labour recruitment for Germany and new countries of immigration for Italy) allowing us to consider these three countries as representative of the three European patterns of immigration.

**Figure 2 - Proportions of immigrants' children on the scholastic population by generation status and group of country (a) and single country (b) (%).**



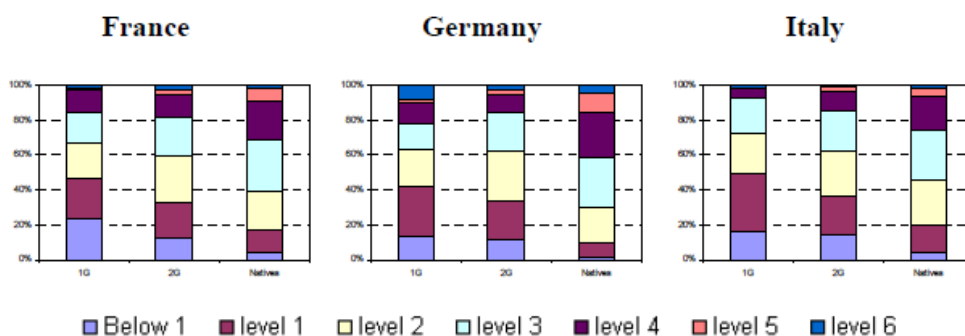
Source: PISA, 2006

Regarding our methodology, we perform such models of logistic regressions by entering subsequent blocks of covariates, where the response variable is represented by the performance in test scores in order to analyze the probability of achieving high performance in test scores. To build this variable, we take into account the classification made by Pisa' staff of experts which divide the science educational attainment of pupils in six levels<sup>4</sup>. By looking at the distribution of pupils in these levels (figure 3), we decided to build the response variable by assuming that levels 6, 5, 4 and 3 represent high achievement in test scores, while levels 2, 1 and below 1 denote low achievement. In particular, figure 3 shows the starting point of this analysis: an evident gap in educational attainments is observed among generations. While the natives perform better in each country, higher proportions of children of immigrants are observed in the "low performance levels". Moreover, there is a decreasing trend in performance with respect to the three considered generations (starting from the 1G, followed by the 2G and the natives). An exception is observed in the German context, where a more similar pattern is shown by the two generations and where a consistent part of the first generation is concentrated in the first level.

<sup>4</sup> Level 6 denotes a "very strong engagement in explaining and applying related knowledge and ability to conceptualize and generalize"; level 5 corresponds to a "very strong engagement in explaining and applying related knowledge"; pupils which are in the 4th level are characterized by a "strong engagement in applying related knowledge"; in level 3 pupils are "able in describing issues related to the specific knowledge"; in level 2 "only literal interpretations are performed"; at last, level 1 denotes only a "limited knowledge of the subject restricted to such familiar contexts".



**Figure 3 - Distribution of pupils by proficiency levels, generation status and receiving country**



Source: PISA, 2006

In order to understand where does this gap derive from and which are the weights of such determinants in explaining this differential pattern, several models have been performed. In particular, we run five different models for each country:

1. In the first one, we consider only the effect of the key covariate represented by generation status (“natives” as reference category);

2. In the second model, we add the socio-economic status indexed by the highest job status of parents (“white collar high skilled” as reference category). Can immigrant socio-economic background explain alone the educational gap that immigrants face? This question is of great relevance: in case immigrants’ achievement differs to that of natives only due to their lower economic background, educational policies would not need to address immigrants’ special needs. Otherwise, migrants’ disadvantage could be then decreased with policies providing additional support for all children with a disadvantaged family background.

3. Cultural capital background’s impact is inserted in the third model to observe whether the economic and cultural explanations are able to explain alone the gap. It is indexed by a) language spoken at home (“national language” as reference category); b) highest educational level of parents, considered as a measure of “institutionalized” cultural capital and measured in accordance with the ISCED – International Standard Classification of Education (“ISCED 5 or 6” as reference category); c) index of cultural possessions (“more than 10 cultural possessions” as reference category).

4. Further, we control also for students’ aspirations and motivations to test the risk aversion theory by building an index composed by measures of a) interest

in science topics; b) future-oriented motivation to learn science; c) science related activities (“high aspirations” as reference category). Nevertheless, this index can only be considered as a proxy of social mobility’s attitudes since it does not provide a direct comparison between pupils’ aspirations and the current socio-economic conditions of parents.

5. The last covariate is represented by the proportion of immigrants’ children in each school in order to verify ethnic school segregation’s mechanisms (“below the mean value observed in each country” as reference category)<sup>5</sup>.

#### 4. Empirical results

In this section we present the main results of the logistic regressions run for each country considered.

In the French case (see Table 1 in Annex) after taking into account of socio-economic status of parents, cultural background, students’ aspirations and ethnic school segregation, the educational disadvantage disappeared for the second generation, while it tends to persist with respect to the first one.

As expected, the socio-economic status and cultural capital background have a strong impact on reducing the gap even if they are not the only barriers for immigrants’ children to reach the achievement scores of their native counterparts. It is worth to noticing that the language spoken at home does not have any significant effect. A possible explanation could be found in the colonial history and assimilation policy, which make the linguistic issues less constraining for the children of immigrants in France. However, we have also to underline that our measure is probably limited to fully capture the effect as in the questionnaire there is not the possibility to take account of pupils who use to speak both the national language and the language of origin; a larger information could probably lead to a more reliable measure particularly in the French context. Many scholars have in fact underlined that a bilingual environment may bring benefits in educational achievement (Bialystok, 2001); although others (Schmidt, 2001) stress that using two languages could instead affect negatively pupils’ performance due to a high confusion, reflected in the scholastic context. An additional interesting result is that

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<sup>5</sup> In the case of Italy, we use an arbitrary limit value of 10% of immigrants’ children per school to build the response variable because of the high presence of schools where immigrants’ children are not present at all. In this case the proportion of schools with more than 10% of immigrants’ children is around the 30%.

after adding the index of students' aspirations and motivations the educational gap tends to augment instead of diminishing. Thus, it seems to have its effect not only on the risk of achieving a high performance but also on the ethnic origins by causing an additional effect of differentiation between children of immigrants and natives. In fact, being children of immigrants and personal aspirations seem to be strictly related.

At last, model 5 in which ethnic school segregation dynamics are considered shows the strongest impact on the ethnic gap whether the second generation's effect disappeared. These results support the findings of numerous French studies that have continually emphasized the importance of considering ethnic spatial segregation as a important determinant in affecting negatively the integration trajectories of immigrants and their children and have also pointed out the inadequacy of current public policies addressed to avoid these dynamics (Simon, 1998; Felouzis, Liot, Perroton, 2005). Nevertheless, a disadvantage position of the first generation of pupils continues to be observed even after controlling for all these determinants.

By contrast, in Germany (See Table 2 in Annex), the raw disadvantages of the first generation of pupils are wholly explained by the parental socio-economic positions and cultural capital background. A partial explanation of this pattern is found in the sample composition. In fact, the major part of first generation students in Germany is composed by pupils from the former Soviet states, who may probably be affiliated to *Spät-Aussiedler* in-migration flows, which reached between 1988 and 2005 a total of three million people entered Germany. *Spät-Aussiedler* are ethnic Germans, so-called repatriates, who are characterized by good levels of education and language skills who may probably face less problems in the scholastic context (Ozcan, 2007).

Otherwise, the determinants taken into account cannot explain the consisting gap between the second generation of migrants and natives, which tends as obvious to strongly decrease but not to disappear. The main part of this reduction of differences is provided by the model 3, where cultural capital background is inserted. In effect, some authors give great importance to the role of parents and above all to the familiarity with the German scholastic system, which is really complex and where the parental role seems to assume great importance. For example, in certain federal states parents are institutionally entitled to select among primary schools. Such studies (Kristen, Granato, 2007) have demonstrated

that a part of parents of children of immigrants simply don't know this regulation and may probably enter a school which offers with respect to its student composition a less favorable environment. From this perspective also ethnic school segregation represents, as demonstrated by these results, a strong factor in reducing the gap. Nevertheless, even after controlling for it the gap between the second generation and natives remains.

Furthermore, in the Italian case (see Table 3 in Annex) even after taking into account of socio-economic status of parents, cultural background, students' aspirations and ethnic school segregation, the educational disadvantage both of the first and the second generation persists.

Socio-economic status and cultural capital background are able to strongly reduce the ethnic gap. Nevertheless, as in the French case, language spoken at home doesn't show any significant effect on the observed decrement. A possible explanation of this pattern could be found in the fact that, since 10 years, a growing number of Italian schools is providing the figure of the so-called intercultural mediator who represents a specific employee in the scholastic personal aimed to deal with any kind of additional needs of school and students related to multicultural issues, in particular with linguistic problems. Nevertheless, the Italian results show that the traditional determinants are far to explain the scholastic gap between immigrants' children and natives suggesting us that a deepen analysis is required.

## **5. Concluding remarks**

Notwithstanding the strong incentives for children of immigrants, often, in most industrialized countries, immigrants children do not perform as well as others. The problem become particularly relevant when we consider the trajectories of the second generation of immigrants, who were born, socialized and educated in the host country and thus who are supposed to share the same opportunities within the same social context of natives. By using PISA data this paper aimed to investigate to what extent does generation status exerts an independent effect on early school performance both conditional and unconditional to socioeconomic resources, cultural capital background, pupils' aspirations and school segregation by trying to assess a comparison three European countries, which represent the three different European patterns of in-migration

flows. We used logistic regressions by entering subsequent block of covariates in order to analyze the weight of the different determinants from which depends the implementation of political strategies addressed to improve the scholastic performance of immigrants' children. Nevertheless, one important limitation is present in this analysis linked to the used dataset: such participating countries (i.e. France) refused to ask for details concerning the specific country of origin of pupils and parents. This constraint did not allow us to investigate on the effect of national origins which was demonstrated by the majority of scholars to provide different trajectories in immigrants' children integration (Portes, Rumbault, 2001; Glick, Hohmann-Marriot, 2007 among others).

However, some relevant findings come out from this analysis, which can be resumed by the following results. We found evidence of the fact: net of socio-economic status, cultural capital background, pupils' aspirations and ethnic school segregation dynamics, both the first-generation and the second-generation of immigrants face additional barriers for succeeding in their educational performance. Interesting exceptions came from the second generation of pupils in France, where ethnic school segregation plays a fundamental role and from the first one in Germany, probably due to the composition of the sample. Further, we are interested in which kind of additional barriers may constrain immigrants' children to achieve at least the same educational performance of their native counterparts. Possible explanations may be related to macro variables, which refers to the national educational systems in which pupils are inserted, i.e. early selectivity processes, the implementation of scholastic policies directly addressed to multicultural issues, institutional mechanisms of discrimination, and so on.

For all these reasons and thanks to the large number of countries in the survey, a multilevel approach seems to be the more appropriate methodology which may allow us to deepen this analysis by focusing on several levels (pupils, schools and countries) in order to investigate on the effects of the overall national educational systems. Thanks to this approach, more evidence may probably come out in understanding also the differences among countries.

Summarizing, most European countries are facing an increasing number of immigrants and from this pressure, new socio-economic problems emerge. Among them one of the most important is that of integration, especially the integration of the second-generation. The integration of second-generation is strongly related to the education and the school system that is the first place of comparison among

them and natives and the first source of human capital accumulation. We find that, overall, the immigrants' child status (whether or not the pupil was born in the country of reception) is *per se* a factor of relatively low human capital accumulation within (compulsory) education, i.e., the immigrants' child status is *ceteris paribus* most likely associated to a worst educational performance. Reception of children from different origins poses thus new challenges to educational institutions both in terms of adapting themselves to cultural diversification of their school population and in terms of adapting their teaching and learning methods to different cultural connotations and meanings of education, teaching and learning. The issue is searching for the best policies, which may avoid the so-called "segmented assimilation" (Portes, 1996; Portes, Rumbault, 2001; Zhou, 2001) which assesses that just a fraction of children of migrants has access to the mainstream of the society, while the majority of them entered and remained at the bottom of the society, into the underclass.

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APPENDIX

Table 1 – Logistic regression results: odds ratio of achieving high performance in test scores, France.\*

FRANCE	Model 1	Model 2	Model 3	Model 4	Model 5
<b>Generation status</b>					
Natives (ref.)	1	1	1	1	1
Second generation	0,53***	0,69***	0,79*	0,70**	n.s.
First generation	0,34***	0,37***	0,39**	0,30***	0,34***
<b>+ Socio-economic status</b>					
<b>Highest parental job status</b>					
White collar high skilled (ref.)		1	1	1	1
White collar low skilled		0,33***	0,46***	0,45***	0,45***
Blue collar high skilled		0,23***	0,38***	0,36***	0,36***
Blue collar low skilled		0,13***	0,22***	0,22***	0,22***
<b>+ Cultural capital background</b>					
<b>Language spoken at home</b>					
Language of receiving country (ref.)			1	1	1
Other languages			n.s.	n.s.	n.s.
<b>Highest parental education level</b>					
ISCED 5 or 6 (ref.)			1	1	1
ISCED 3 or 4			0,84**	n.s.	n.s.
Below ISCED 3			0,67***	0,72**	0,72**
<b>Cultural possessions</b>					
More than 10 (ref.)			1	1	1
From 7 to 10			0,33***	0,37***	0,37***
Less than 7			0,14***	0,15***	0,15***
<b>+ Risk aversion theory</b>					
<b>Index of pupils' aspirations</b>					
High aspirations (ref.)				1	1
Low aspirations				0,39***	0,39***
<b>+ Ethnic school segregation</b>					
<b>% of imm.' children per school</b>					
≤ the mean value (≤12,1%) (ref.)					1
> the mean value (>12,1%)					0,71***

Legend: \*\*\*p<0.001; \*\*p<0.01; \*p<0.05.

\* Controlled for sex.



Table 2 – Logistic regression results: odds ratio of achieving high performance in test scores, Germany.\*

GERMANY	Model 1	Model 2	Model 3	Model 4	Model 5
<b>Generation status</b>					
Natives (ref.)	1	1	1	1	1
Second generation	0,31***	0,43***	0,61**	0,62**	0,71**
First generation	0,34***	0,40***	n.s.	n.s.	n.s.
<b>+ Socio-economic status</b>					
<b>Highest parental job status</b>					
White collar high skilled (ref.)		1	1	1	1
White collar low skilled		0,38***	0,46***	0,46***	0,47***
Blue collar high skilled		0,34***	0,45***	0,45***	0,46***
Blue collar low skilled		0,25***	0,40***	0,40***	0,41***
<b>+ Cultural capital background</b>					
<b>Language spoken at home</b>					
Language of receiving country (ref.)			1	1	1
Other languages			0,51***	0,51***	0,53***
<b>Highest parental education level</b>					
ISCED 5 or 6 (ref.)			1	1	1
ISCED 3 or 4			n.s.	n.s.	n.s.
Below ISCED 3			0,29***	0,31**	0,32**
<b>Cultural possessions</b>					
More than 10 (ref.)			1	1	1
From 7 to 10			0,46***	0,50***	0,50***
Less than 7			0,28***	0,29*	0,29*
<b>+ Risk aversion theory</b>					
<b>Index of pupils' aspirations</b>					
High aspirations (ref.)				1	1
Low aspirations				0,57***	0,56***
<b>+ Ethnic school segregation</b>					
<b>% of imm.' children per school</b>					
≤ the mean value (≤13,2%) (ref.)					1
> the mean value (>13,2%)					0,67***

Legend: \*\*\*p&lt;0.001; \*\*p&lt;0.01; \*p&lt;0.05.

\* Controlled for sex.

Table 3 – Logistic regression results: odds ratio of achieving high performance in test scores, Italy.\*

ITALY	Model 1	Model 2	Model 3	Model 4	Model 5
<b>Generation status</b>					
Natives (ref.)	1	1	1	1	1
Second generation	0,47***	0,55***	0,62*	0,62**	0,68*
First generation	0,31***	0,39***	0,47***	0,45***	0,53***
<b>+ Socio-economic status</b>					
<b>Highest parental job status</b>					
White collar high skilled (ref.)		1	1	1	1
White collar low skilled		0,68***	0,80***	0,80***	0,80***
Blue collar high skilled		0,36***	0,54***	0,54***	0,54***
Blue collar low skilled		0,37***	0,55***	0,55***	0,55***
<b>+ Cultural capital background</b>					
<b>Language spoken at home</b>					
Language of receiving country (ref.)			1	1	1
Other languages			n.s.	n.s.	n.s.
<b>Highest parental education level</b>					
ISCED 5 or 6 (ref.)			1	1	1
ISCED 3 or 4			n.s.	n.s.	n.s.
Below ISCED 3			0,64***	0,66***	0,66***
<b>Cultural possessions</b>					
More than 10 (ref.)			1	1	1
From 7 to 10			0,49***	0,51***	0,51***
Less than 7			0,21***	0,23***	0,24*
<b>+ Risk aversion theory</b>					
<b>Index of pupils' aspirations</b>					
High aspirations (ref.)				1	1
Low aspirations				0,67***	0,68***
<b>+ Ethnic school segregation</b>					
<b>% of imm.' children per school</b>					
≤ 10,0% (ref.)					1
> 10,0%					0,49***

Legend: \*\*\*p<0.001; \*\*p<0.01; \*p<0.05.

\* Controlled for sex.