Gender and Educational Achievement of Immigrant Children in Spain

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Extended Abstract

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Introduction

Social science research on immigrants and their children has primarily focused on the United States whose history and identity is inextricably tied to the integration of diverse groups of people. However, many European countries now have significant shares of their population that are from abroad. Moreover, this change has been more dramatic and accelerated in some countries as they shift from nations that send its citizens abroad to those who receive new immigrants. Spain is one such case. In fact, in 2005, it received more immigrants than any other European country (Zufiaurre, 2006; Ibarraran, Lasagabaster and Sierra, 2008). Figure 1, which was generated from statistics from the Organisation for Economic Co-operation and Development (OECD), shows the relative shares of foreign-born in Spain compared to the US, UK, France, and Germany.

[Figure 1 about here.]

Specifically, according to OECD Statistics, Spain's foreign-born population was 13.4 percent of the total. This is comparable to the 13.6 percent of the population of the United States that is foreign born. Pinyol (2010) estimates that in 1990, there were approximately 400,000 foreign-born people in Spain, which was about 1 percent of the total population. Currently, estimates of the foreign-born population in Spain range from 4.7 million (Ministry of Labour and Immigration in 2009) to 5.6 million (using municipal census data) (Garrido and Olmos, 2009).

Given that the increase in the immigrant population occurred over a very short period of time, there are very few studies of immigrant children in Spain. In fact, researchers primarily from Spain, have just begun to examine the socioeconomic attainment of Spain's newest residents.

In this extended abstract, we propose to examine the integration of youth by documenting nativity differences in the educational outcomes of immigrant children in one region of Spain. In particular, we examine data from Catalonia, an autonomous region in the North-East of Spain and one of the main immigrant receiving regions in the country. We use data from the Longitudinal Study of Families and Childhood (Pànel de Famìlies i Infancia). Infancia) to document generational differences in students' test scores in Mathematics, Spanish, and Catalan. We pay particular attention to gender differences in achievement in order to examine whether immigrant girls adjust to life in Spain differently from boys.

The Longitudinal Study of Families and Childhood is a school-based survey designed to assess lifestyles, educational outcomes, and health-related behaviors of adolescents aged 13 to 16 in the first wave (2006). Students were recruited from 80 schools that are representative of Catalonia. The study was conducted by the Instituted of Childhood and the Urban Studies (CIIMU) and sponsored by the Catalan government. Three thousand students in grades 7 to 10 completed questionnaires in between April and June of 2006, and again in 2007 and 2008 (at about the same time in the year). The parents of the adolescents (either their mother, father or an adult responsible for the child) completed an in-home interview between June 2006 and January 2007. The current paper employs data from Wave I.

The Spanish Context

The expansion of education that took place during most of the 20th century across developed countries was also followed by Spain, albeit lagging a few decades. In the last

five decades, Spain has been challenged with unprecedented changes in its educational system. First, in terms of numbers of years of compulsory education, which went from about six to ten; and then in terms of proportion of the population being served. To put this in context, until 1963, compulsory education in Spain was for children aged 6 to 12. Through a series of educational reforms in the following years, compulsory education is currently designed for 10 academic years. Next, between 1976 and 1999, schooling is widespread even in pre-compulsory years. About 1.5% of children age 3 were in school in 1975-76; they were 75% in 1999. For children aged 4 it goes from 51% to over 99% in the same period. Most relevant for the current study is that 80% youth aged 17 (beyond compulsory education) were in school in 1999, compared to 36% of them in 1975 (OECD, 2001).

As a consequence of this expansion, up to the late 1990s, schools also increased their diversity in terms of the socio-economic background of their students, especially in the upper compulsory years as well as in the university. Starting in the late 1990s, a new challenge is presented, the increasing presence of children born outside of the country. The arrival of immigrant children in Spanish classroom presents a number of new challenges, such as serving students with limited language skills and different cultural backgrounds, that are still to be examined.

According to data published by the Spanish Ministry of Education, in the academic year 2002-2003, about 5.6% of students in Spain up to age 16 were foreign-born (CIDE, 2005). As for the second generation, according to Gibson and Carrasco (2007), 15% of all students in compulsory education are children of immigrants. Moreover, they find that 20 percent of newborns are by foreign-born women (Gibson and

Carrasco, 2007). Whereas this may not seem a large proportion of the total population, especially when referring to foreign-borns, the percentages are comparable to those of the U.S. Most importantly, the U.S. has a long history of immigration, however, Spain has become for the first time in modern history an immigrant country, as it had historically been a country of 'emigrants'.

As is typically the case of immigration, the geographic distribution of the immigrant population is uneven across the country. Some regions receive larger proportion of immigrant than others. The large metropolis, Madrid and Barcelona, are important immigrant destinations. Particularly relevant for our study is that during the 2003-2004 school year, in Catalunya, the region were this study is based (and were Barcelona is located), 8% of the total schooled children aged 12-16 were foreign born (CIDE, 2005), well above the country's average. Given the continued arrival of immigrants in the following years, it would be reasonable to expect that these percentages are higher than the ones reported.

In great part due to its geographical location (Spain is the European country closest to the African continent) and historical relation to Latin America, Spain currently receives about half of its immigrants from South America although there are sizable immigrants from Morocco and Romania (Reher and Requena, 2009). It may be assumed that for those arriving from Latin America, the migration to Spain would not imply a linguistic disadvantage. However, Spain is a multilingual country and, in several regions instruction takes place in a language other than Spanish. Thus, difficulties for immigrants, even when arriving from Latin America, may be significant. Catalunya is

one of those regions, where instruction is done in Catalan (Spanish is one subject, much like Mathematics, or English).

Immigrant Youth and Academic Performance

Numerous studies based on data from the United States show that immigrant youth and children of immigrants face numerous obstacles in school. Because most of the immigrants to the United States are from Latin American and Asia, most immigrants have limited English proficiency. Moreover, cultural orientations about school and how parents should participate in their children's lives at school are very different Asia or Latin America, where parents are not expected to play an active role in the lives of their children at school (Turney and Kao, 2009). Language barriers also make it very difficult for immigrant parents to participate, even if they understood teacher expectations for them to do so.

While scholars expect that immigrant children will have great problems in adapting to school, research in the past several decades suggest that some immigrant students can have better educational outcomes than their native-born counterparts. For instance, Kao and Tienda (1995) argue that immigrant parents show an optimism about the relative rewards of schooling. In fact, they found that children with immigrant parents had better educational outcomes (in terms of test scores, grades, and educational aspirations) than their same-race third generation counterparts. Other scholars suggest that some immigrant children can be more resilient and draw strength from community and cultural ties despite their poorer backgrounds. For instance, Zhou (1997a) argued that despite living in a poor community in Louisiana, the Vietnamese Americans

managed to enjoy successful academic outcomes despite their disadvantage setting and their own low socioeconomic status. Some have termed the findings of immigrant success as the *Immigrant Paradox*.

However, it is clear that in most parts of the world, immigrants tend to be a relatively disadvantaged population albeit heterogeneous. In Spain, as in the United States, migrants from some countries enjoy better outcomes due to their privileged class positions as well as their ethnic and status. In later versions of this paper we will investigate some of these variations.

Whereas no comprehensive data on student achievement is officially made public in Catalonia, the OECD *Programme on International Student Assessment* (PISA) has been collecting achievement data on key subjects such as Mathematics and Reading across countries. PISA has become the main referent to compare European countries in terms of achievement of the schooled population in each of the countries involved in the program. According to a recent study using PISA data, students in Spanish schools tend to have lower achievement in reading and math than the rest of OECD countries. While some studies have appeared on the foreign-born student population in Spain, these are still incipient, and no attention has been paid to foreign-born children or the children of immigrants (second generation).

A female advantage?

It is well-known in among American sociologists of education that "Jane reads and writes so well." (Mickelson, 1989). Spain is not an exception to this trend. No comprehensive data on student achievement is officially made public in Catalonia,

however, graduation rates suggest that females are achieving at higher rates than males in Catalonia. Data from 2007, reports that 80% of females graduate from high school, but only 64% of men did. In addition, 70% of females aged 17 in Spain are enrolled in post-obligatory education, but only 58% of males are (OECD, 2008). A recent report from the PISA data, highlights the Spanish female advantage in reading achievement among 15-year olds; however, males overperformed females in Mathematics (OECD, 2009). How immigrant females and males compare in their achievement has not been studied [section to be expanded.]

Measures

Dependent measures: educational achievement is measured as the self-reported grades on Mathematics, Spanish language, and Catalan language. Because in Spain grades are recorded in a different scale from how it is typically done in the U.S., students' grades were recoded to correspond the U.S. system. Achievement in each of these subjects takes values between 0 and 4, where 0 equals E/F and 4 equals A.

Independent measures: As stated above, our main measures of interests are immigrant origin and gender. Immigrant origin is measured in the following manner: first generation identifies children who are foreign born, second generation refers to children born in Spain with at least one parent born abroad; third generation indicates that both child and parent were born in Spain, thus it includes third and beyond generations. Gender is dummy-coded were female=1 and male=0.

In addition to immigrant background and gender, we are interested in how social integration and attitudes towards school are related to the achievement of the students. In

the complete version of this paper we will include appropriate theoretical justification for each of the measures included in the study.

Finally, we also include a number of measures of family background that have traditionally been demonstrated to be related to achievement such as income and parental education (Blau and Duncan 1967; Sewell and Hauser 1975). In preliminary analyses we examined family structure, number of siblings, number of people living in the home, etc., but none improved the models or appeared to be significantly related to the measures included in the study. We also include controls for age of the child.

Results

For the purpose of brevity, we just describe the main trends appearing from the predictive models (descriptive analyses to be included in full paper). Table 1 shows that first generation students lag behind in Math, Spanish, and Catalan compared to their third generation counterparts even after considering socio-economic differences as well as social integration and differences in attitudes towards school. Children of immigrants (or second generation) do not appear to have different achievement levels from those of their third generation counterparts once socio-economic differences are taken into consideration (descriptive models showed that first and second generation adolescents had significantly lower achievement in all three measures). This suggests that, among second generation students, the differences in achievement are the result of differences in the socio-economic characteristics of the households in which children of immigrants live. In other words, they are more likely to come from disadvantaged backgrounds which have negative effects on their educational outcomes. On the other hand, the

educational disadvantage of first generation students seems to have sources that go beyond the socio-economic characteristics assessed in our models.

Interestingly, for first generation students, once we include measures of social integration and attitudes towards schools, their achievement gap, compared to third generation students, widens. This suggests that first generation students are facing barriers in their social integration that negatively affect their school achievement. This finding will be further explored in subsequent versions of the paper.

[Table 1 about here.]

Table 2 replicates the models presented in Table 1, but divides students by gender. As we can see from this table, there are differences in the achievement gap of male and female foreign-born students compared to their third generation counterparts. The gap seems larger for females than for males. In particular, first generation females score 0.67 points lower in Math than third generation females. Among males, though foreign-born students also score lower than third generation students, the difference is smaller than that seem for females (0.45 points). Interestingly, while first generation females' achievement is significantly lower than that of third generation females in both Catalan and Spanish, the differences among men are only marginally significant in Catalan, and there are no differences in Spanish. This may be pointing at two different mechanisms, under similar socio-economic circumstances, levels of social integration, and attitudes towards school, male immigrants are displaying higher achievement than their female counterparts, thus the foreign-bron disadvantage in achievement is mostly driven by females. Alternatively, native boys are having low levels of achievement that

are more easily achieved by foreign born male students. We will more closely explore this gender/immigrant difference in detail in further versions of the manuscript.

[Table 2 about here.]

Discussion

As a strong predictor of social and occupational mobility, understanding achievement differences among immigrant adolescents is a key piece to understand the socio-economic prospects of these individuals into the society that most likely will see them grow in to adulthood. A significant amount of research has been done in the U.S., regarding the educational outcomes of foreign-born students and the children of immigrants but no comparable efforts have been done around the world (Buchman and Parrado, 2006). As countries like Spain increasingly become receiving countries with a very culturally, racially, and ethnically diverse population, it is imperative that more research focuses on how these new immigrants incorporate into the schools and what hurdles they encounter while in these institutions. Our study aims to provide a glimpse into the question of how immigrant and non-immigrant students compare in their educational performance by paying particular attention to gender differences and the moderating effects that social integration and attitudes towards school may have on the achievement of these students.

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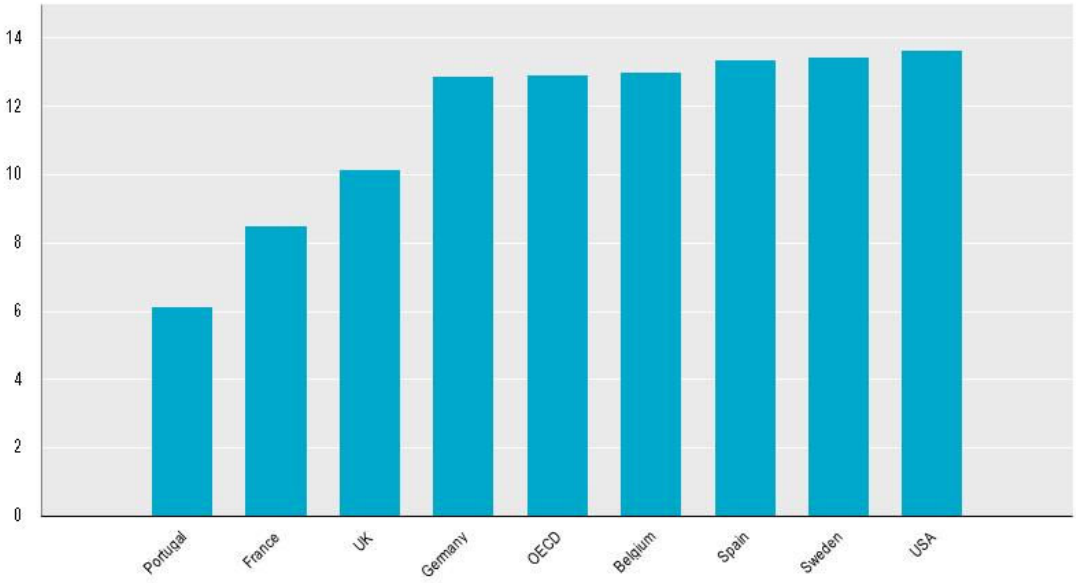
Figure 1. Foreign-born population *As a percentage of total population, 2007 or latest available year*



Source: OECD (2010). *OECD Factbook 2010: Economic, Environmental and Social Statistics.*

Table 1. Generational Status on Students' Math, Catalan and Spanish Language Achievement (OLS coefficients)

	Grades					
	Math		Spanish		Catalan	
	M1	M2	M1	M2	M1	M2
First generation	-0.435 ***	-0.584 ***	-0.431 ***	-0.559 ***	-0.494 ***	-0.579 ***
	(0.106)	(0.115)	(.096)	(.105)	(.093)	(0.101)
Second generation	-0.151 †	-0.128	-0.093	-0.108	-0.053	-0.093
	(0.088)	(0.088)	(.080)	(.080)	—	—
Third+ generation (ref.)	—	—	—	—		
Female	0.098 †	-0.096 †	0.427 ***	0.284 ***	0.427 ***	0.267 ***
	(0.053)	(0.055)	(.048)	(.050)	(.047)	(.048)
Age	-0.074 ***	-0.034	-0.027	-0.003	-0.035 †	-0.002
	(0.02)	(0.021)	(.019)	(.019)	(.018)	(.019)
Family yearly income (in euros)						
Up to 21,600 (ref.)	—	—	—	—	—	—
21,601-28,800	-0.09	-0.021	0.118	0.134	0.015	0.073
	(0.09)	(0.091)	(.082)	(.083)	(.080)	(.080)
28,801-36,000	-0.025	0.006	0.095	0.115	0.068	0.095
	(0.09)	(0.091)	(.082)	(.083)	(.080)	(.081)
36,001-43,200	-0.041	-0.032	0.00	-0.026	0.065	0.051
	(0.108)	(0.109)	(.099)	(.099)	(.096)	(.096)
43,201-50,400	-0.031	-0.043	0.09	0.047	0.063	-0.019
	(0.116)	(0.117)	(.105)	(.106)	(.102)	(.102)
50,401 or more	-0.132	-0.117	0.013	-0.028	-0.068	-0.096
	(0.103)	(0.103)	(.094)	(.094)	(.092)	(.091)
Variable income	-0.033	0.032	-0.001	0.013	-0.042	-0.033
	(0.085)	(0.086)	(.077)	(.078)	(.075)	(.075)
Mother's education	0.028	0.014	0.009	0.003	0.025	0.015
	(0.022)	(0.023)	(.020)	(.021)	(.020)	(.020)
Social Integration						
Number of good friends		-0.003 **		-0.005 ***		-0.004 ***
		(0.001)		(.001)		(.001)
Friends in school from total friends		0.049 †		0.033		0.032
		(0.028)		(.025)		(.024)
Friends want to go to college		0.184 ***		0.141 ***		0.155 ***
		(0.026)		(.023)		(.023)
Friends have foreign-born parents		0.021		0.018		0.064 †
		(0.038)		(.034)		(.033)
Attitudes towards school						
School teaches useful things for future		0.262 **		0.134		0.157 **
		(0.09)		(.082)		(.079)
Feels comfortable in school		0.193 *		0.240 ***		0.239 ***
		(0.078)		(.070)		(.068)
Likes to study		0.392 ***		0.289 ***		0.332 ***
		(0.057)		(.052)		(.050)
Works hard to get good grades		0.345 ***		0.336 ***		0.301 ***
		(0.071)		(.065)		(.063)
Constant	2.89 ***	0.972 **	2.044 ***	0.669 **	2.198 ***	0.593 †
	(.294)	(.362)	(.267)	(.329)	(.261)	(.318)

Total N: 2,634

p<0.10 † p<0.05 *, p<0.01 ***, p<0.001 ***

Table 2. Generational Status on Students' Math, Catalan and Spanish Language Achievement by Gender (OLS coefficients)

	Grades					
	Math		Catalan		Spanish	
	Females	Males	Females	Males	Females	Males
First generation	-0.670 ***	-0.459 *	-0.769 ***	-0.284 †	-0.769 ***	-0.21
	(0.147)	(.186)	(.130)	(0.162)	(.135)	(.167)
Second generation	-0.063	-0.210	-0.113	-0.068	-0.142	-0.053
	(0.117)	(.136)	(.102)	(0.119)	(.106)	(.122)
Third+ generation (ref.)	—	—	—	—	—	—
Age	-0.020	-0.053	-0.017	0.009	-0.014	-0.001
	(0.028)	(.033)	(.025)	(0.029)	(.026)	(.030)
Family yearly income (in euros)						
Up to 21,600 (ref.)	—	—	—	—	—	—
21,601-28,800	-0.048	0.015	0.089	0.045	0.161	0.082
	(0.119)	(.142)	(.105)	(0.124)	(.108)	(.128)
28,801-36,000	-0.081	0.102	0.052	0.128	0.089	0.125
	(0.12)	(.141)	(.106)	(0.123)	(.109)	(.127)
36,001-43,200	-0.13	0.114	0.028	0.097	-0.164	0.194
	(0.14)	(.175)	(.124)	(0.153)	(.128)	(.157)
43,201-50,400	-0.054	-0.064	0.026	-0.095	0.123	-0.066
	(0.155)	(.178)	(.137)	(0.155)	(.141)	(.159)
50,401 or more	-0.144	-0.080	-0.182	0.037	-0.177	0.178
	(0.135)	(.160)	(.120)	(0.141)	(.123)	(.145)
Variable income	0.164	-0.141	0.135	-0.240 *	0.165	-0.179
	(0.113)	(.132)	(.099)	(0.116)	(.103)	(.119)
Mother's years of education	0.028	-0.003	0.032	-0.010	0.013	-0.013
	(0.029)	(.036)	(.026)	(0.031)	(.027)	(.032)
Social Integration						
Number of good friends	-0.003	-0.003	-0.006 **	-0.004 *	-0.005 **	-0.004 **
	(0.002)	(.002)	(.002)	(0.002)	(.002)	(.002)
Friends in school from total friends	0.069 †	0.026	0.039	0.029	0.036	0.036
	(0.036)	(.043)	(.032)	(0.038)	(.033)	(.002)
Friends want to go to college	0.170 ***	0.206 ***	0.143 ***	0.171 ***	0.135 ***	0.151 ***
	(0.033)	(.041)	(.029)	(0.036)	(.030)	(.037)
Friends have foreign-born parents	0.033	0.013	0.13 **	-0.026	0.084	-0.069
	(0.05)	(.058)	(.045)	(.051)	(0.046) †	(.052)
Attitudes towards school						
School teaches useful things for future	0.240 †	0.265 *	0.205 †	0.083	0.069	0.152
	(0.124)	(.132)	(.109)	(0.115)	(0.113)	(.119)
Feels comfortable in school	0.265 *	0.110	0.181 †	0.273 **	0.183 †	0.285 **
	(0.111)	(.110)	(.098)	(0.096)	(0.101)	(.098)
Likes to study	0.384 ***	0.386 ***	0.39 ***	0.243 **	0.341 ***	0.195 *
	(0.073)	(.091)	(.065)	(0.080)	(0.067)	(.082)
Works hard to get good grades	0.481 ***	0.228 *	0.331 ***	0.287	0.455	0.237
	(0.104)	(.100)	(.091)	(0.087) ***	(0.094) ***	(.090) **
Constant	0.461	1.461 **	0.890 *	0.704	0.981	0.841 †
	(0.479)	(0.569)	(0.422)	(0.496)	(0.436)	(.511)
Total	1,485	1,149	1,485	1,149	1,485	1,149