THE SECONDARY EDUCATION CHOICES OF IMMIGRANTS AND NON-IMMIGRANTS IN ITALY[1]

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1. Introduction

Secondary schooling is not compulsory in the Italian educational system and enrolment decisions may originate from differences in individual behaviour or socio-economic conditions of families. Additionally, such decisions may affect opportunities for future employment and social mobility. All these aspects may differ among immigrant and non-immigrant youth and, for the former, secondary schooling plays a role in social integration as well (Entwisle and Alexander, 1993).

The objective of this paper is to ascertain the differences between the two groups, immigrants and non-immigrants (hereinafter referred to as Italians), with respect to the choice to continue or to interrupt their secondary schooling, taking into account individual, social and demographic characteristics and family background. The data were extracted from two surveys carried out by the Italian National Institute of Statistics (Istat): The European Union Statistics on Income and Living Conditions (EU-SILC) – carried out yearly since 2004 under the coordination of Eurostat – and the Italian Survey on Income and Living Conditions of the Families with Immigrants (IT-SILCFI) – carried out in 2009.

The paper is organised as follows. Section 2 concisely describes the theoretical background, and Section 3 illustrates the sample, data and some descriptive results concerning the main variables used in the subsequent analysis. Section 4 describes the models and includes comments on the results. Finally, Section 5 briefly concludes with some comments and remarks.

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[1] This paper is based on data from Istat, European Union - Statistics on Income and Living Conditions (EU-SILC). The responsibility for all conclusions drawn from the data lies entirely with the authors: Disclaimer clause suggested by Eurostat on its website. The paper is the result of the cooperation of both authors. However, the specific contributions of each author are as follows: Sections 1 and 3 are by Michele Lalla, Section 2, 4, and 5 are by Elena Pirani.

2. Background

Educational choices of youths are made at a particular stage in the life of these young people, when influences both inside and outside the home are strongly felt. In this sense, educational choices strongly depend on both individual and family characteristics, as well as on the social and contextual background of the area where they reside.

Firstly, at individual level, gender, age and health conditions have proved to be associated with the choice to continue one's education and training. In this context, immigrant status, nationality, and the length of stay in the country clearly also play a role.

Secondly, educational choices reflect and originate from the family context of young people, including both natives and immigrants. The effect of family background on assimilation and expectations has been thoroughly analysed for both natives and immigrants, and different factors have been identified as relevant in these processes: household size and family composition, educational level of parents, socioeconomic status, parental language and expectations, parental supports and involvement, cultural background and income. The influence of these factors in the educational choices of young people has also been investigated (Luciano et al., 2009) to some extent.

Lastly, the social context of the community and the area of residence may be also relevant. The schooling context has been analysed as a source of inequality between natives and immigrants and/or among different groups of immigrants as well: attending kindergarten, previous experiences of success and failures, advice of teachers and peers, and availability of schools in the area. The context of the community of residence may refer to social characteristics of the neighbourhood (Pong and Hao, 2007) and to economic characteristics. The former have been often represented considering crime levels, characteristics of peers, companionship and so on, while the economic factors may refer to the employment/unemployment rate in the area of residence, the local gross domestic product, the value added by sectors (Bertolini et al., 2013).

3. Selected sample and variables

Our empirical analysis is basically based on the EU-SILC data gathered for Italy by Istat. The EU-SILC data refer to yearly information on nationally representative random samples of private households in each European country, and they comprise a cross-sectional and a longitudinal component (Eurostat, 2009).

Beside individual socio-demographic characteristics, EU-SILC provides micro-level data on income, poverty, social exclusion and living conditions. It started in 2004 under framework regulation (European Council) no. 1177/2003 adopted by the Council and the European Parliament in 2003.

In order to obtain a consistent sample and comparable information for immigrants, data from the Italian Survey on Income and Living Conditions of Families with Immigrants (IT-SILCFI) were considered together with the EU-SILC sample. This survey has the same structure as the EU-SILC survey, although it involves some additional specific variables. The IT-SILCFI was carried out by Istat only in 2009, so we decided to utilize data from both surveys for 2009.

Both surveys collected data at the household and the individual level. In 2009, the number of household units was 20,492 for EU-SILC and 6,014 for IT-SILCFI, while the number of eligible household members, i.e., people aged 16 and over, was 51,196 for EU-SILC and 15,036 for IT-SILCFI, for a total of 66,232 individuals (Table 1).

Overall, secondary education mostly involved youths under 20 years of age (Table 1). Only 2.6% (52 subjects) of those continuing their secondary education were 20 years old and 12.8% were aged 21 and over. The latter percentage was not too low, and it should be noted that 68 (26.5%) out of 257 subjects came from IT-SILCFI, and they were distributed over an age range of 21-61 years. There were 2,086 youths in secondary schools out of 2,675 in the sample, i.e. 78%.

Table 1 – *Number of subjects by type of school currently attended and age.*
Legend: SE=Secondary Education, TE= Tertiary Education, PhD= Philosophiae Doctor

| ISCED Level | Age | | | | | | | Total | Sample |
currently attended	<= 15	16	17	18	19	20	>= 21		16-19
Primary Education (PE)	0	**6**	**7**	**12**	**2**	4	112	143	**0**
Lower SE: 2-3Y (LSE)	0	**62**	**31**	**22**	**10**	6	62	193	**125**
Upper SE: 4-5Y (USE)	0	**546**	**488**	**467**	**193**	52	257	2,003	**1,694**
Post SE (no TE)	0	**3**	**1**	**3**	**10**	9	63	89	**17**
First/second-stage TE	0	**9**	**7**	**15**	**217**	253	1,658	2,159	**248**
Post TE	0	**1**	**1**	**0**	**0**	0	363	365	**2**
PhD	0	**0**	**0**	**0**	**0**	0	65	65	**0**
Not In School (NIS)	10,985	**69**	**111**	**141**	**268**	352	49,289	61,215	**589**
Total	10,985	696	646	660	700	676	51,869	66,232	**2,675**

The descriptive statistics for the main variables included in the analysis are reported in Table 2 and subdivided into three categories: (1) the socio-demographic characteristics of youths were gender, age, general health classified as in good versus not in good health, chronic illness and immigrant status both classified as yes or no; (2) parental and family information consisted of (for both mother and father) age, education (low, average, and high), and general health, employment

situation (either both or only one parent employed), and household income per capita; (3) lastly, due to the scarcity of detailed information, the geographic area of residence was simply defined through the degree of urbanisation (high, average, or low density) and the macro-region of residence (North-West, North-East, Centre, South, Islands).

Table 2 – *Mean of the main variables by status and by current education.*
Legend: LSS = Lower Secondary School, USS = Upper Secondary School, PSS = Post-Secondary School, NIS = Not In School. F = Father, M = Mother. Mdn=median.

| Variables | Non-immigrants = 73.5% | | | | Immigrants = 26.5% | | | | |
Current education	LSS*	USS	PSS	NIS	LSS	USS	PSS	NIS	Total
No. of cases	64	1,293	240	370	61	401	27	219	2,675
Individual characteristics									
Women	0.47	0.51	0.54	0.45	0.46	0.51	0.67	0.46	0.50
Age	16.70	17.18	18.75	18.05	16.98	17.19	18.44	18.00	17.51
General health	0.06	0.04	0.06	0.08	0.02	0.03	0.07	0.05	0.05
Chronic illness	0.17	0.06	0.08	0.06	0.02	0.02	0.00	0.02	0.05
Parental and family characteristics									
Father's age	49.12	50.33	51.17	49.47	45.95	46.97	49.32	44.11	49.14
Mother's age	46.11	47.07	48.62	46.73	42.08	42.82	47.81	40.58	45.86
Max education (Mdn)	4	6	6	4	4	5	5	4	5
General health (Mdn)	4	4	4	4	4	4	4	4	4
Chronic illness	0.27	0.20	0.24	0.24	0.21	0.17	0.19	0.09	0.19
Employed: F & M	0.27	0.42	0.44	0.25	0.26	0.33	0.26	0.19	0.36
Employed: F	0.44	0.35	0.32	0.40	0.38	0.36	0.52	0.47	0.37
Employed: M	0.13	0.13	0.12	0.13	0.20	0.20	0.07	0.22	0.15
Retired	0.05	0.04	0.05	0.08	0.00	0.00	0.00	0.00	0.04
Other condition	0.13	0.07	0.07	0.15	0.16	0.10	0.15	0.12	0.09
Permanent job	0.58	0.65	0.68	0.53	0.16	0.22	0.19	0.21	0.52
White-collar	0.27	0.46	0.49	0.22	0.05	0.10	0.33	0.03	0.33
Income per capita/10^3	9.30	10.73	12.26	8.50	4.50	6.56	9.57	5.63	9.33
Area of residence									
City: High density	0.39	0.34	0.35	0.35	0.38	0.39	0.48	0.38	0.36
City: Average density	0.31	0.40	0.45	0.36	0.46	0.46	0.41	0.43	0.41
City: Low density	0.30	0.26	0.19	0.28	0.16	0.14	0.11	0.18	0.23
Region: North-West	0.22	0.18	0.18	0.17	0.16	0.24	0.33	0.21	0.19
Region: North-East	0.41	0.22	0.18	0.18	0.20	0.25	0.22	0.21	0.22
Region: Centre	0.17	0.21	0.27	0.17	0.20	0.24	0.15	0.15	0.21
Region: South	0.16	0.28	0.30	0.33	0.26	0.15	0.22	0.29	0.27
Region: Islands	0.05	0.11	0.08	0.14	0.18	0.12	0.07	0.14	0.11

In general, women tended to continue their education longer than men ($\chi_3^2 = 8.60$ with $p<0.035$). Women attending upper secondary or post-secondary education represented 64.4% and 11.1% of the sample, respectively, with respect to

62.2% and 8.9% registered for men. The percentage of women not in school was lower than that of men: 20.2% versus 23.9%.

Young immigrants tended to continue their education less than young Italians do ($\chi^2_3 = 110.27$ with p<0.000). Only 3.3% of immigrants attended lower secondary education in 2009, with respect to 8.6% of Italians; the percentages of immigrants attending upper secondary or post-secondary education were lower than those of Italians: 56.6% versus 65.7% and 3.8% versus 12.2%, respectively. On the other hand, the percentage of immigrants not in school was disproportionately higher than that of Italian young people (30.9% versus 18.8%).

The general health of youth was weakly associated with their enrolment in school. Youths in bad health tended to prolong their education less than those without health problems. The presence of chronic illnesses did not appear to be associated with educational decisions in a relevant manner.

Differences between young Italian natives and immigrants were also found for parental background. The age of fathers and mothers of Italians was significantly higher than that of fathers and mothers of immigrants, showing on average a difference equal to 4.1 years ($F_{7;2667} = 36.78$ with p<0.000) and 4.9 years ($F_{7;2667} = 45.19$ with p<0.000), respectively. Italian parents seemed to be affected by chronic illness more than immigrant parents. The economic status and the occupational status of Italian fathers and mothers were significantly higher than that of immigrant parents, as was the total family income per capita of Italians: 4,244€ ($F_{7;2667} = 34.61$ with p<0.000). Moreover, this income is almost halved for youths attending post-secondary education and for youths who were not enrolled in schools.

4. Results

The decision to continue or interrupt one's education was analysed for young Italians and immigrants. A binary variable, *Y*, denoting the dichotomised choice with respect to schooling, "in school" (*y*=1) versus "not in school" (*y*=0) was considered with respect to a vector of covariates **X**. Let $\pi(\mathbf{x})$ be the probability that *Y*=1 depending on the vector of covariate values **x**. The logit model is

$$\pi(\mathbf{x}) = \frac{\exp(\mathbf{x}'\boldsymbol{\beta})}{1+\exp(\mathbf{x}'\boldsymbol{\beta})} = \Lambda(\mathbf{x}'\boldsymbol{\beta}) \tag{1}$$

where $\Lambda(\cdot)$ denotes the logistic cumulative distribution function and the vector of coefficients $\boldsymbol{\beta}$ describes the effect of the covariates **X** on $\pi(\mathbf{x})$.

The covariates were selected based on the literature and depending on their statistical significance. Our main explanatory variable was the immigrant status of young respondents. Given that our objective was to ascertain differences between immigrants and Italians with respect to the choice to continue or to interrupt their education, we sequentially estimated models with different sets of covariates. Among the individual socio-demographic variables, the following were selected: immigrant status, gender and age, while personal health or any chronic illness or unmet need for medical and dental examination or treatment were excluded to avoid capturing effects concerning relatively few individuals. The geographic context was introduced, differentiating among the Italian macro-regions (North, Centre, South). Family background was introduced in the logit models through the variables concerning mother's and father's age, their educational level, activity status (differentiated by occupation and type of occupation) and self-perceived health. The logarithm of total income was introduced to account for the economic situation of the household. Considering the variables included in the model, the reference individual was an Italian male, living in the North of Italy, having parents with average schooling, both employed, none of them white-collar, and in good health. Table 3 reports the odds ratios (OR) and p-values (Pr>z) of the estimated models.

The young immigrants revealed a significant lower probability of continuing their education than young Italians: controlling only for gender, age and macro-area of residence (Model 1). Young immigrants were at risk of not remaining in school, i.e., 50% less than their Italian counterparts. However, the magnitude of the effect – and its significance – slowly decreased as other covariates were taken into account. In the completed model, which controlled for all parental and family covariates (Model 4), the probability of young Italians continuing their education was not significantly higher than that of young immigrants. The variables used to represent the family environment appeared to play a relevant role in explaining differences in continuing education between natives and immigrants. Firstly, for youths with parents having a high (low) level of education, the probability of continuing their education was twice (half), OR=2.03 (OR=0.52) that of youths with parents having average schooling. Secondly, with respect to individuals whose parents were both employed, the probability of continuing education was lower for other parental employment situations (with ORs ranging from 0.48 to 0.73). Thirdly, the type of occupation also mattered: having at least one parent employed as a white-collar worker increased the probability of being enrolled in school, with respect to less skilled occupations. Finally, having parents in good health represented a further factor that might contribute to enhancing school enrolment.

Table 3 – *Estimated odds ratio (OR) and corresponding p-values (Pr>z) for some models.*

	Model 1		Model 2		Model 3		Model 4	
	OR	**Pr>z**	**OR**	**Pr>z**	**OR**	**Pr>z**	**OR**	**Pr>z**
Immigrant: yes=1, no=0	**0.48**	**0.000**	**0.47**	**0.000**	**0.69**	**0.002**	**0.90**	**0.439**
Women: yes=1, no=0	1.22	0.046	1.21	0.049	1.21	0.065	1.28	0.029
Age of respondent	0.56	0.000	5.27	0.353	7.58	0.279	12.73	0.212
Age of resp. (squared term)			0.94	0.211	0.93	0.154	0.91	0.114
Region: Centre			1.18	0.248	1.26	0.127	1.34	0.074
Region: South & Islands			0.66	0.000	0.82	0.102	0.91	0.475
Age father					1.09	0.065	1.12	0.117
Age father (squared term)					1.00	0.306	1.00	0.276
Age mother					1.11	0.005	1.11	0.050
Age mother (squared term)					1.00	0.017	1.00	0.114
P education: Low					0.39	0.000	0.52	0.000
P education: High					1.94	0.002	2.03	0.003
P occupation: Only father					0.69	0.004	0.73	0.023
P occupation: Only mother					0.52	0.000	0.56	0.008
P occupation: Both "other"					0.48	0.000	0.48	0.001
P Typ_Occ: White-collar							1.81	0.000
P Health: Less than good							0.76	0.025
Income (log)							1.03	0.676
Constant	100.00	0.000	0.00	0.614	0.00	0.332	0.00	0.229
Pseudo R^2 – no. of cases	*0.078*	*2,675*	*0.087*	*2,675*	*0.161*	*2,307*	*0.170*	*2,307*

Legend: P = Parents, Typ_Occ = Type of Occupation, "other"=other status.

5. Conclusions

An empirical analysis was performed to investigate differences in educational enrolment between native Italian young people and immigrant youth. Our empirical results are coherent with those previously reported in the literature, and suggest that an "immigration" gradient is present in educational choices also in Italy. However, differences among the two groups disappear when family background is taken into account. Most of the differences in educational enrolment between Italians and immigrants were absorbed by the socio-economic status of their parents, i.e., their level of education, employment status and occupational position. These results highlight the need for integrated policies in educational programs, directed both at sustaining youth and helping their families, in order to enhance and improve educational enrolment of young immigrants and foster a complete integration process. However, further investigation is needed to analyse potential differences more thoroughly at the geographic level.

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SUMMARY

The secondary education choices of immigrants and non-immigrants in Italy

The choice of secondary schooling, which is not compulsory in Italy, is important for youths because it affects future opportunities for employment and social mobility. Secondary schooling also plays a role in the social integration of immigrants. To ascertain the presence of differences between young Italian natives and immigrants in education choices, two datasets for 2009 were used: the European Union Statistics on Income and Living Conditions (EU-SILC) and the Italian Survey on Income and Living Conditions of the Families with Immigrants in Italy (IT-SILCFI).

Analysing a sub-sample of young Italians and immigrants, aged between 16 and 19 years old, the association of both individual and family explanatory variables with the choice of secondary schooling (yes/no) was assessed using logistic models. The results show that young immigrants tend to interrupt their schooling earlier than their Italian counterparts. However differences disappear when family background and parental characteristics are taken into account.

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