

Research Institute for the Evaluation of Public Policies



IRVAPP

RESEARCH INSTITUTE FOR
THE EVALUATION OF PUBLIC POLICIES

Educational expansion without equalization: social origins and children's choice of the upper secondary track in Italy (1958-1989)

Raffaele Guetto

Loris Vergolini

<http://irvapp.fbk.eu>

January 2016

FBK-IRVAPP Working Paper No. 2016-01

**Educational expansion without equalization: social origins and
children's choice of the upper secondary track in Italy
(1958-1989)**

Raffaele Guetto

University of Trento

Loris Vergolini

FBK-IRVAPP

FBK-IRVAPP Working Paper No. 2016-01

January 2016



Research Institute for the Evaluation of Public Policies
Bruno Kessler Foundation
Via S. Croce 77, 38122 Trento (Italy)

Phone: (+39) 0461.314209

Fax: (+39) 0461.314240

E-mail: info@irvapp.it

Website: <http://irvapp.fbk.eu>

The purpose of the IRVAPP Working Papers series is to promote the circulation of working papers prepared within the Institute or presented in IRVAPP seminars by outside researcher with the aim of stimulating comments and suggestions. Updated review of the papers are available in the Reprint Series, if published, or directly at the IRVAPP.

The views expressed in the articles are those of the authors and do not involve the responsibility of the Institute.

Educational expansion without equalization: social origins and children's choice of the upper secondary track in Italy (1958-1989)

Raffaele Guetto[‡], Loris Vergolini[†]

January 2016

Abstract

This paper analyzes trends and patterns of social inequalities in the choice of the upper secondary track in Italy (1958-1989). The latter is particularly important to understand the persistently strong effects of social origins on educational attainment in the Italian setting, given the relatively high degree of stratification of its educational system at the upper secondary level. Empirical analyses are carried out on a unique dataset obtained by merging five waves of the IARD survey on the condition of Italian youth (1983-2004), which allows to distinguish the effects of parental education and social class. Results show that, regardless of a huge and generalized expansion of the academic track, relative social inequalities did not decrease substantially neither in terms of parental education nor social class. Moreover, consistently with theoretical expectations, social class inequalities in the relative and absolute chances of enrolling at the academic track are stronger at high levels of parental education, while they are largely muted among low-educated parents. We suggest the latter as a possible mechanism to explain why educational expansion has not produced an overall decline in the association between social origins and educational attainment.

Keywords: tracking; upper secondary education; inequality of educational outcomes; Italy.

[‡] Corresponding author. University of Trento, raffaele.guetto@unitn.it.

[†] FBK-IRVAPP, vergolini@fbk.eu.

1. Introduction

Trends over time in Inequalities of Educational Outcomes (IEO) have been widely scrutinized in industrialized countries. The general consensus on the persistency of IEO throughout the 20th century, which prevailed during the '90s (Shavit & Blossfeld, 1993), has gradually left space to competing arguments claiming a weakening of the association between social origins and educational attainment (Breen & Jonsson, 2005; Breen et al., 2009a, 2009b). Research concerning trends in IEO in Italy followed the same pattern, shifting from empirical analyses which found persistent inequalities (Cobalti & Schizzerotto, 1993, 1994) to more recent studies claiming that a process of equalization has taken place (Ballarino & Schadee, 2008; Barone, Luijkx, & Schizzerotto, 2010; Barone & Guetto, forthcoming; Recchi, 2007; Schizzerotto & Marzadro, 2008; for a review, see Triventi, 2014).

Most of the mentioned studies concerning Italy showed that IEO have declined during the period of the Italian “economic miracle” (i.e., for individuals born in the '40s and the '50s), mostly (but not exclusively) among agricultural classes and at lower educational levels. This pattern of “selective equalization” (Barone & Guetto, forthcoming), recently confirmed as a feature common to many industrialized countries (Ganzeboom & Treiman, 2014), brought some scholars to question the substantive relevance of the critiques of the persistent inequality thesis (Shavit, Yaish, & Bar-Haim, 2007). Such concerns seem particularly cogent in the Italian case. In fact, it has been shown that trends toward declining IEO have flattened out among the youngest cohorts of individuals born in the '60s and the '70s (Barone & Guetto, forthcoming). Nowadays, Italy stands as one of the most economically unequal among the industrialized countries (Nolan et al., 2014), as previous results on social fluidity (Breen & Luijkx, 2004) and IEO already suggested (Breen et al., 2009a).

This paper contributes to the literature on trends in IEO by analyzing social inequalities in the choice of the upper secondary track in Italy. The latter is particularly important to understand the (persistently) strong effects of social origins on educational attainment in the Italian setting, given the relatively high degree of stratification of its educational system at the upper secondary level. The questions we aim to answer are the following: how are social inequalities in the choice of the upper secondary track structured by parental education and social class? Did they change among individuals born between 1958 and 1989?

With respect to previous contributions on the topic (Panichella & Triventi, 2014; Pisati, 2002), which focused on long-term trends, our analyses focus on the youngest cohorts and cover individuals born up to 1989. They do so by making use of a unique dataset obtained by merging five waves of the IARD survey on the condition of Italian youth (1983-2004). Pooling different

data sources and relying on large samples is particularly important to obtain a reliable picture of trends and patterns of IEO (Barone & Guetto, forthcoming; Barone, Luijkx, & Schizzerotto, 2010). Moreover, following recent suggestions in the literature (Bukodi & Goldthorpe, 2013), the data allows us to disentangle the effects of parental education and social class.

Differently from previous works on the Italian case (Panichella & Triventi, 2014; Pisati, 2002), we document a huge and generalized expansion of enrollments at the academic upper secondary track, which started among individuals born in the early '70s. Although expansion has also involved children belonging to the lowest social strata, our analyses suggest that their relative disadvantage compared to the most privileged social groups has diminished only slightly. In addition, we find that parental education and social class jointly contribute to IEO: social class inequalities in the chances of enrolling at the academic track are stronger at high levels of parental education, while they are largely muted among low-educated parents. We suggest the latter as a possible mechanism to explain why educational expansion has not produced an overall decline in the association between social origins and educational attainment.

2. Theoretical background

2.1 The Italian educational system

Nowadays education in Italy is compulsory from 6 to 16 years of age¹ and is divided into four main stages: primary, lower and upper secondary school, and tertiary education. Primary school (*scuola elementare*) is compulsory and lasts for five years. It is designed for children from six to eleven years old and offers general education to all the students in the country on the basis of the same curricula. Secondary education is divided into two levels. The lower secondary school (*scuola media inferiore*) is compulsory and lasts for three years, usually until students are 14 years old. Education in this stage is still undifferentiated: schools all over the country provide students with the same general competencies. This state of affair was introduced in 1962. Before this date the lower secondary school was stratified into two tracks: *avviamento professionale* and *scuola media*. Only the second track gave the chance to enroll in upper secondary school, while the first one was merely vocational and intended to prepare students for the labor market.

Upper secondary school (*scuola media superiore*) is the first level characterized by tracking. Three are the tracks available: the academic, the technical and the vocational. The academic track includes the prestigious and demanding classical and scientific lycei (*liceo classico* and *liceo scientifico*) as well as “specific” lycei focused on foreign languages (*liceo linguistico*), arts (*liceo*

¹ In fact, the Italian law states that, conditional on having attended the first two years of upper secondary school, a student can leave the educational system at age 15 (*obbligo scolastico*), but he/she is obliged to enroll in a training course for at least another year (*obbligo formativo*).

artistico) and music (*conservatorio*). The technical track (*istituti tecnici*) provides theoretical and vocational education in the economic and technological fields. For the type of education provided, also teaching-training schools (*scuole/istituti magistrali*) can be considered as belonging to this track. Vocational institutes (*istituti professionali*) supply vocational training in areas of the service, industry and craft sectors.

Each track lasts for five years and ends with a final exam known as *Esame di Maturità*. In Italy, all students passing this exam have the possibility to enroll at university, independently of the attended track. This opportunity was introduced in 1969 with the complete liberalization of access to tertiary education. Indeed, before 1969 only students who graduated from an academic track could continue to the university. However, there is a bulk of empirical evidence showing that access to tertiary education in Italy is highly stratified based on the choice of the upper secondary track: while the large majority of pupils who attended the academic track subsequently enroll at university, the chances of doing so decline moving to technical and especially the vocational tracks (Azzolini & Vergolini, 2014).

There are also some further vocational courses (held by the already mentioned *istituti professionali* or by so called *Centri di Formazione Professionale, CFP*) that offer a degree after only two or three years and do not give access to university. Local governments manage these schools, thus their organization can vary from region to region. For example, in some regions special rules allow students to take the *Esame di Maturità* after the completion of additional courses, so that they can access tertiary education.

2.2 Theories on trends in IEO concerning the choice of the upper secondary track

Italy, in the period under scrutiny (1958-1989), has witnessed a huge increase of enrollments at upper secondary schools (Panichella & Triventi, 2014). Since access to upper secondary education has become almost universal for individuals born in the second half of the '70s, our focus throughout the paper will be on the relative chances of enrolling in the different tracks. There are three possible theoretical expectations on the relation between educational expansion and trends in IEO concerning the choice of the upper secondary track.

According to a first hypothesis, educational expansion, by making less discriminatory the selection process, could be related to an *equalization* of the chances of reaching the academic track for children of different social origins. However, existing empirical evidence on the effects of educational expansion on vertical inequalities does not support this claim. For instance, IEO in Italy declined before the educational expansion fostered by the above-mentioned reforms of the '60s, likely due to the industrialization process (Ballarino & Schadee, 2008; Barone & Guetto, forthcoming). In fact, expansion per se, when explicitly operationalized, came out to even increase

the association between social origins and children's educational attainment (Bar Haim & Shavit, 2013). Therefore, there are no reasons to expect the expansion of the enrollments at upper secondary schools in Italy to be related to a decline in the relative disadvantage of children of lower social strata to attend the academic track.

On the contrary, according to the *Effectively Maintained Inequality* (EMI) hypothesis, even when transitions to a certain level of education become almost universal, such as enrollments at upper secondary schools among younger Italian cohorts, higher classes will maintain their relative advantages by choosing the most remunerative tracks (Lucas, 2001). Empirical evidence supporting this hypothesis was first found, for the Italian case, in Pisati (2002) and recently confirmed in a study by Panichella & Triventi (2014). However, both studies found an increase of social class inequalities in reaching the academic track among children born before the 70s. That is, in the early stages of the educational expansion at the upper secondary level and when very few children enrolled at the academic track. In fact, our descriptive findings, shown in Fig. 1, suggest that a huge increase of the enrollments at the academic track occurred starting from the early '70s. Differently from what shown in Panichella & Triventi (2014), also children of the Working class and Petite bourgeoisie have significantly increased their chances of enrolling at the academic track (Fig. 2).²

It can be argued that an increase of IEO might indeed follow the early stages of an expansion process, since the higher classes are the first to exploit the new opportunities (Bar Haim & Shavit, 2013). But this might be a temporary stage, while in the long-run class differences remain stable, or start to decline only when the expansion, at a certain educational transition, approximates the saturation level (Arum, Gamoran, & Shavit, 2007). Therefore, it seems reasonable to hypothesize that, despite the expansion of the academic track, IEO in the choice of the upper secondary track have remained fairly stable among recent Italian cohorts. Our first hypothesis can be therefore summarized as follows:

H1: "*persistent inequality*" is the best approximation of trends in IEO in the choice of the upper secondary track in Italy.

2.3 Disentangling the effects of parental class and parental education

Recent contributions recalled the importance of disentangling the effects of different dimensions of "social origins", since trends in IEO might concern differently parental education, status and social class (Bukodi & Goldthorpe, 2013; Marzadro & Schizzerotto, 2014). Beyond the analysis of trends

² Apart from possible data concerns due to their limited sample size, a reason why the mentioned authors did not find a generalized expansion of the academic track is related to their youngest cohort being too broad, including individuals born between 1969 and 1983.

over time, given that we hypothesize horizontal IEO in Italy to have remained fairly stable, it is interesting to study more analytically how the effects of parental education and social class are intertwined. While it is well-known, in the Italian literature on social stratification, that parental education is a stronger predictor of educational attainment than social class (Ballarino & Schadee, 2010; Barone, 2009; Triventi et al., 2015), we predict class inequalities in reaching the academic vs. technical or vocational tracks to be stronger at higher levels of parental education. More precisely, our second hypothesis can be summarized as follows:

H2: the association between parental social class and children's enrollment at the academic track, with respect to technical and vocational ones, is stronger at higher levels of parental education.

The basic intuition behind this hypothesis is that parents who have reached a high class position without a significant educational investment, as well as parents whose educational investment did not pay off in terms of class returns, do not believe in the value of investing in their children's academic education.

Based on rational-action accounts of parental choices usually applied in the literature, parents would choose for their children the type of education perceived as necessary to allow them to reach at least the same social class they belong to (Breen & Goldthorpe, 1997; Breen & Yaish, 2006). If this is the case, highly educated parents who succeeded in reaching at least the intermediate classes would likely put a lot of emphasis on their children's educational attainment. This should be the more true in Italy among public servants and registered professionals, given the high levels of credentialism in the Italian labor market (Barone, 2013). Investing in their children's academic education presents particularly high expected returns for parents belonging to the professional orders, since, in Italy, the access to the liberal professions follows strict "familistic" recruitment channels (Pellizzari and Orsini, 2012). On the contrary, highly educated parents who failed to reach at least the intermediate classes could think that investments in academic education are too risky and eventually not worth.

The same risk-aversion mechanism would suggest that low-educated parents do not have strong incentives in investing in their children's academic education if they belong to the working class. But also if they managed to reach the entrepreneurial or small proprietors classes they could think that academic education is not really necessary: it is well-known that urban – and especially agricultural – self-employed classes tend to reproduce themselves thanks to direct inheritance of capital rather than educational credentials (Erikson & Goldthorpe, 1992). The low incentives of low-educated parents, belonging to the self-employed classes, to invest in their children's academic education are exacerbated in the Italian labor market. In Italy, self-employed, largely

operating in low human capital intensity sectors, can earn much more and are better able to avoid poverty than skilled manual or routine non-manual workers (Brandolini, 2005).

To sum up, at higher levels of education, different incentives' structures should produce an additional social fracture, in the chances to enroll at the academic track, between children of the Bourgeoisie and the White collars on the one hand and children of the other classes on the other. The existence of such an interaction between parental education and social class would suggest a *compositional explanation* for the stability of IEO, even in spite of a huge process of educational expansion. In fact, educational expansion would go hand-in-hand with an increasing share of high-educated parents, among which social class differences have been posited to be stronger. This could have partly counterbalanced the equalizing effects of a less discriminatory selection process in the educational system.

3. Data and methods

The data used in this paper comes from the IARD surveys on the condition of the youth carried out on representative samples of young Italians in 1983, 1987, 1992, 1996, 2000, and 2004 (Buzzi et al., 2007).³ IARD definition of “youth” changed over time: the age-range is 15-24 in the first two waves, 15-29 in the third and fourth ones, 15-34 in the last two waves. To carry out our analyses we pooled together all the waves except from the 1987 one for lacking information on crucial variables, while in the 1992 wave only information for those who were attending upper secondary school at the moment of the interview is available. By doing this, we rely on repeated observations for the selected cohorts, apart from the oldest one only covered by the 1983 wave (Table 1).

The dependent variable is track choice in the upper secondary school. We first coded the original information in seven categories: not enrolled; vocational track (less than 5 years); vocational track; technical track; specific lyceum (*linguistico, artistico, conservatorio, psico-socio-pedagogico* and *scienze umane*); scientific lyceum; and classical lyceum.⁴ However, for the analyses presented here we opted for reduced version considering four categories: not enrolled; vocational track; technical track; and academic track.

³ IARD is a private research center that has been conducting research on Italian youth for 40 years. IARD data has been already used in international researches on educational inequality (Contini and Scagni, 2013) and family behaviours in Italy (Rosina and Fraboni, 2004). More information on the quality of our data and measures is provided in the appendix.

⁴ As mentioned, teaching-training schools have been included in the technical track. However, since the second half of the 90s, the latter schools have been replaced by “*liceo psico-socio-pedagogico*” and “*liceo delle scienze umane*”, which have been included among specific lycei. That is because teachers of primary and pre-primary schools are now required to hold a specific tertiary degree, for which students are prepared in the above-mentioned lycei.

Table 1. Sample size according to cohort and wave.

Wave \ Cohort	<i>IARD83</i>	<i>IARD92</i>	<i>IARD96</i>	<i>IARD00</i>	<i>IARD04</i>	Total
1958-64	2,585	2	0	0	0	2,589
1965-69	1,295	10	487	652	142	2,586
1970-74	0	239	833	809	602	2,483
1975-79	0	267	730	795	622	2,414
1980-89	0	0	155	541	1,430	2,126
Total	3,880	518	2,205	2,797	2,796	12,196

The main independent variables are parental social class and parental education. For parental social class, we rely on a variable which follows the EGP scheme (Erikson & Goldthorpe, 1992) and, more precisely, the specification that has been applied in the Italian studies on social stratification (Cobalti & Schizzerotto, 1994). It should be stressed that our measure of parental class has not been obtained by means of objective information on employment status and standard ISCO classifications of occupations. Rather, children were asked to select both parents' occupational positions among a set of pre-coded ones that we aggregated in 5 categories (applying the dominance criterion) defined as follows⁵: Bourgeoisie (classes I and II); White collars (classes IIIa and IIIb); Petite bourgeoisie (classes IVa and IVb); Working class (classes V; VI and VIIa); Farmers (classes IVc and VIIb); an additional dummy for unemployed and inactive parents.⁶ Our operationalization of social class is potentially exposed to two sources of measurement error: the adoption of crude occupational codes and possible biases deriving from children's misreports of their parents' occupation. As far as the first issue is concerned, it has been shown that, in fact, social class is as reliably and validly measured by either crude or detailed occupational codes (Ganzeboom, 2005). Results presented in the Appendix (Table A1) further comfort us about the accuracy of our measures of social origins.

Both parents' educational attainment has been recoded in 5 categories: parents without any title, those with primary, lower secondary, upper secondary and tertiary education. Given that preliminary analyses (Table A3 in the Appendix) showed that both variables contribute to children's track choice, we will employ a principal component factor score drawn from the two variables.

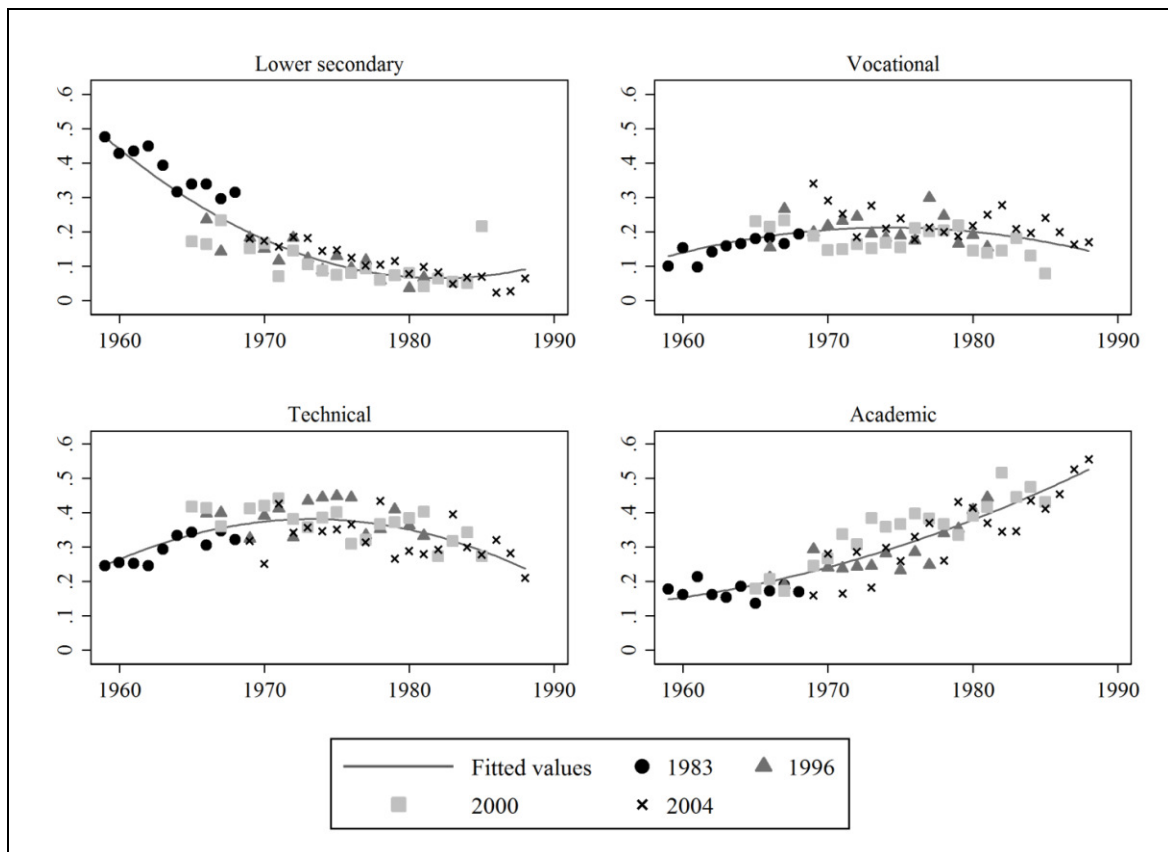
The third independent variable is the birth cohort, coded in five categories of similar sample sizes and number of covered years: 1958-1964; 1965-1969; 1970-1974; 1975-1979 and 1980-1989.

⁵ For reasons of harmonization across the different waves we could not separate classes IIIa and IIIb.

⁶ In this last category are included cases with non-working parents for which it has not been possible to recover the last occupation. However, they constitute altogether less than 5% of the final sample and their results are never commented.

In Fig. 1, we show trends over birth cohorts concerning track choices, separately for the different waves.⁷ It clearly emerges that the different waves provide common cohort trends, this suggesting a high level of consistency between their sampling designs. Trends over cohorts show that enrollment at upper secondary education has become almost universal for individuals born after the first half of the '70s. In the same period, trends show a substantial decline in both vocational and technical tracks in favor of a huge and generalized expansion of the academic one. As mentioned, the latter did not emerge clearly in Panichella & Triventi (2014): while we do find that children of the Petite bourgeoisie and the Working class have gradually become the most likely to enroll at vocational and technical tracks, trends of increasing enrollments at the academic one are very similar among all classes.⁸

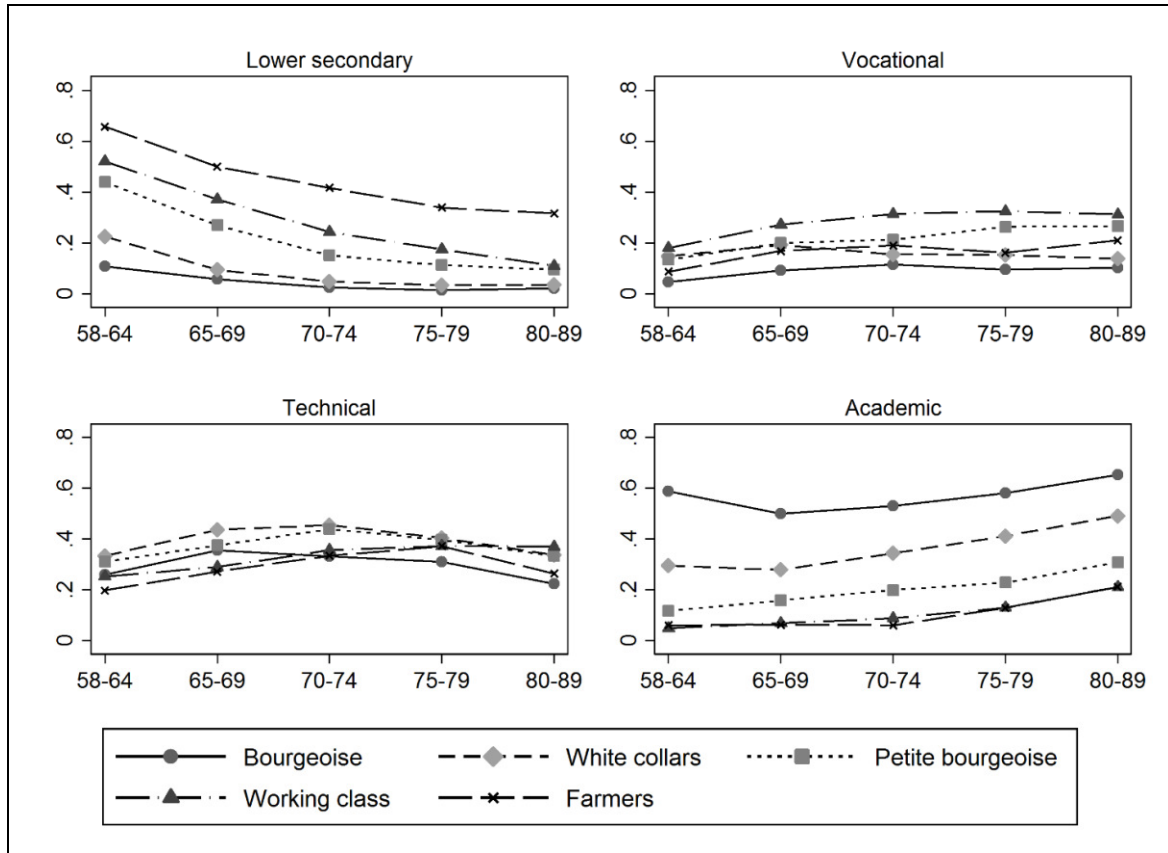
Figure 1. Proportion of students enrolled in the different tracks of upper secondary school.



⁷ The 1992 survey has been excluded from the graph given its very small sample size.

⁸ Enrollment levels into the different tracks recovered by our data are highly consistent with those supplied by both the Italian statistical office and the Italian Ministry of Education (see Table A2 in the Appendix).

Figure 2. Proportion of students enrolled in the different tracks of upper secondary school according to parental social class.



Additional control variables are sex and geographic area of residence (North-West; North-East; Centre; South and Islands).

Considering that the attended track is a discrete categorical variable, we modelled the odds, say η_{ij} , that student i falls in the field j ($j=1, \dots, J-1$) as opposed to a baseline field ($j=J$) as follows:

$$(1) \quad \eta_{ij} = \frac{\pi_{ij}}{\pi_{iJ}} = \alpha_j + \beta_1 Peduc_i + \beta_2 Class_i + \beta_3 Cohort_i + \beta_4 Sex_i + \beta_5 Area_i + \beta_6 Sex_i \cdot Cohort_i$$

Where $Peduc$ represents a factor score for parental education; $Class$ is a vector of dummy variables measuring parental social class; $Cohort$ is a vector of dummies for birth cohorts; Sex and $Area$ are a set of dummies for respondents' sex and geographical area of residence. Finally, the interaction between sex and birth cohort is included in order to take into account the expansion of female schooling. Equation (1) represents the baseline model and any extension will be evaluated

using this model as a reference.⁹ In order to test our hypotheses, we estimate three additional models, adding to the baseline one an interaction between parental education and birth cohort; parental class and birth cohort; and between parental education and class. We rely on Log-likelihood ratio (Llr) tests to assess whether the baseline model’s goodness-of-fit improves with the different specifications.

4. Results

4.1 Trends in social inequalities concerning the choice of the upper secondary track

In Table 2 we compare fit statistics of Model 1, the baseline model representing equation (1), which assumes persistent inequality, with Models 2 and 3 which assume changes over cohorts, either in direction of increasing or decreasing inequalities.

Table 2. Goodness-of-fit measures for nested models.

Model	N	Log-likelihood	d.f.	AIC	BIC	Llr test (p-value)
1. Baseline	12,196	-13,430.85	57	26,975.70	27,398.00	---
2. Interaction between cohort and parental education	12,196	-13,423.58	69	26,985.17	27,496.38	14.53 (0.268)
3. Interaction between cohort and parental social class	12,196	-13,392.86	117	27,019.72	27,886.55	75.98 (0.080)
4. Interaction between parental social class and education	12,196	-13,388.93	72	26,921.86	27,455.30	83.83 (0.000)

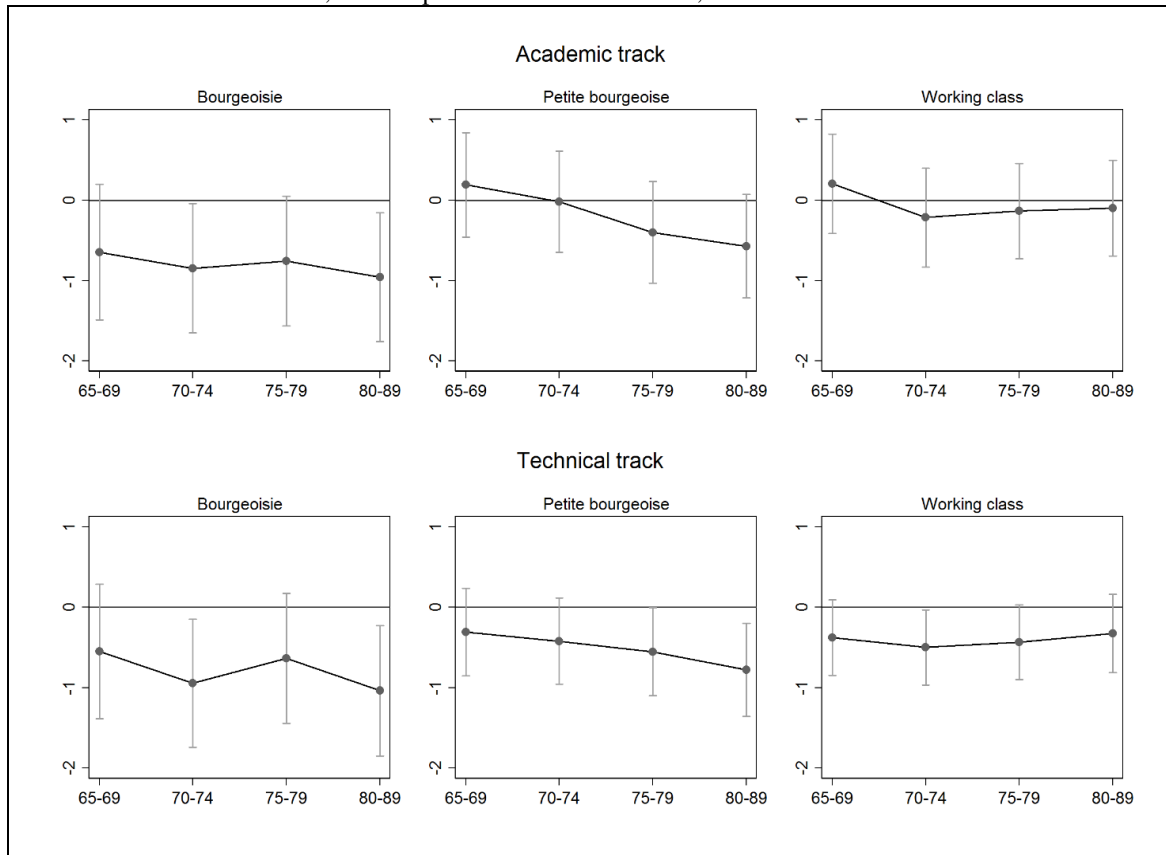
Legend: AIC = Akaike Information Criterion; BIC = Bayesian Information Criterion; d.f. = degrees of freedom; Llr-test = Log-likelihood ratio test.

Note: the Log-likelihood for the null model is equal to -16,541.17. The Llr-test compares the baseline model with models with the interactions.

As both AIC and BIC statistics indicate, the lost in parsimony of models with interactions between social origins and birth cohort is not counterbalanced by a substantial decrease of the Log-likelihood. That is, persistent inequality represents an accurate and parsimonious description of trends in relative chances of children of different social origins to enroll in the different tracks. However, the Llr-test reports marginally significant changes over cohorts as far as the effects of parental class are concerned. The discrepancy between AIC and BIC statistics on the one hand and the Llr-test on the other suggests that marginal changes in IEO concerning the choice of the upper secondary track have occurred within a picture of substantial inertia of social inequalities (Barone & Guetto, forthcoming). To analyze more in detail the direction of these changes, in Fig. 3 interaction coefficients between parental class and birth cohort are reported.

⁹ We refer to the appendix (Table A3) for a brief discussion showing that the chosen operationalization of parental education and class, relative to the inclusion of both parents’ characteristics, represents an optimal solution in terms of parsimony and predictive power of the model.

Figure 3. Logit parameters and corresponding standard errors deriving from a multinomial logistic regression to analyze the effects of parental social class on the choice of the academic and technical tracks, with respect to the vocational one, over birth cohorts.



Note: the reference categories for parental social class and birth cohort are “White collars” and “1958-1964” respectively. The parameters represent interaction coefficients between parental social class and birth cohort.

Each plot of Fig. 3 describes how the relative chances of reaching the academic (top panel) or the technical (bottom panel) *vs.* vocational track have changed for children of different class of origins, relative to children of White collars parents. Due to the small number of cases among youngest cohorts, results concerning Farmers are not reported. Results indicate that the White collars have reduced their distance from the Bourgeoisie in the relative chances of reaching both technical and academic tracks. White collars have also gained a slight advantage over the Petite-bourgeoisie, especially concerning the chances of enrolling in the technical track, even if the interaction effects become significant at the 5% level only in the last cohort. On the contrary, the disadvantage of Working class children compared to their White collars counterparts did not change much throughout the observed period, especially as far as enrollment in the academic track is concerned. All in all, results suggest that the marginally significant change in the effects of parental class found in Model 3 in Table 2 is mostly driven by the improved chances of reaching

technical and academic tracks among children of the White collars, and partly so also among children of the Working class.¹⁰

4.2 Class inequalities at different levels of parental education

Do class inequalities in children's choices of the upper secondary track change at different levels of parental education? The comparison of fit statistics of Models 4 and 1 in Table 2 shows that the BIC statistics of the model with the interaction between the two measures of social origins is still bigger than that of the baseline model. However, the AIC statistics, which puts less emphasis on model's parsimony, is now smaller than that of the baseline model. Moreover, the Llr test is highly significant.

Our hypothesis H2 claims that class inequalities should be stronger at higher levels of parental education. Such hypothesis would be confirmed by the prevalence of negative and highly significant interaction coefficients between parental education and class, which are shown in Fig. 4. Each plot shows how the relative chances of children of different social classes, relative to the Bourgeoisie, in reaching the technical (left panel) or the academic (right panel) track, relative to the vocational one, change with a unitary increase of the factor score measuring parental education. Results confirm our expectations that the interaction is particularly salient for the choice of the academic track, creating an additional fracture between the Bourgeoisie and the White collars on the one hand and all other classes on the other.

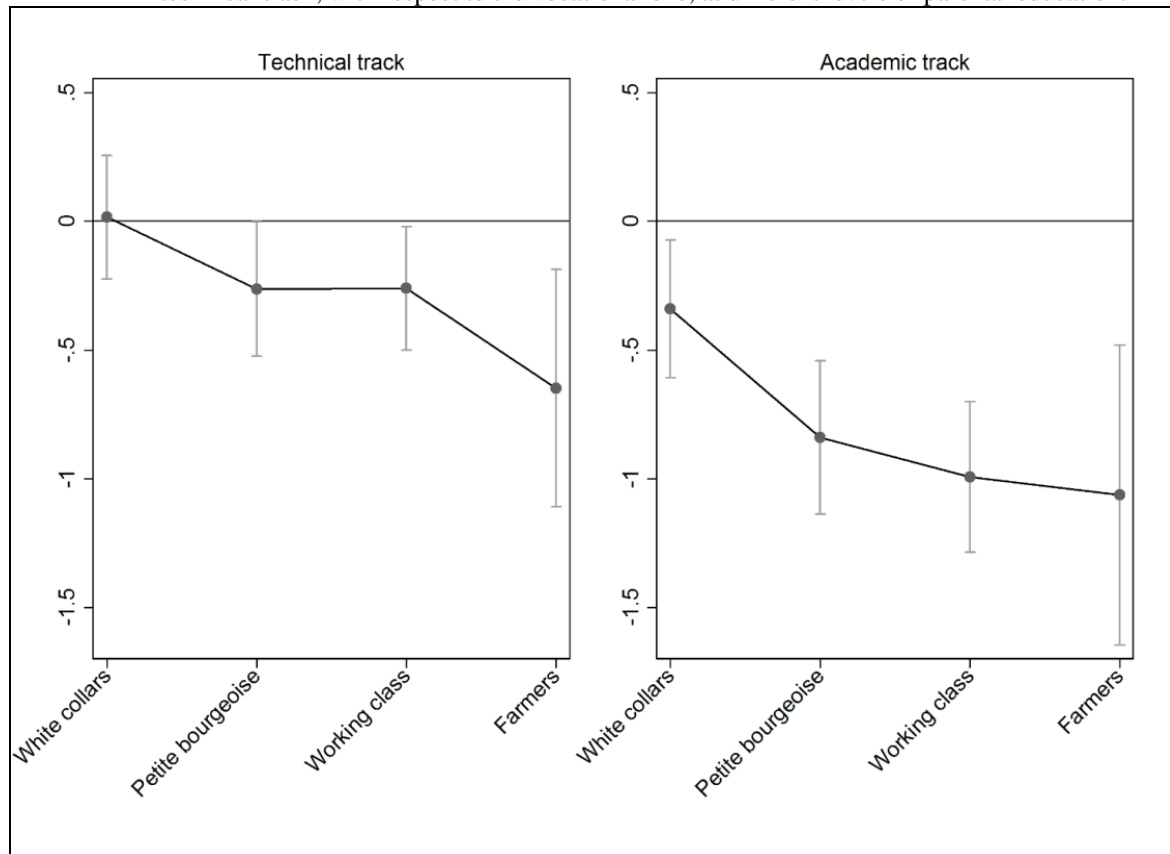
It is interesting to evaluate the predicted probabilities of reaching the academic track for specific combinations of parental education and class, thus providing a picture of how the absolute chances of reaching the academic track are defined in terms of both variables. Predicted probabilities, based on the same model as above, are presented in Fig. 5, for combinations of parental class and tertiles of the factor score for parental education (see note to Fig. 5 for details).

At lower levels of parental education very small class inequalities are found, so that the absolute chances of enrolling in the academic track are lower than 15% for children of all classes. At medium levels of education, a monotonic increase in the probabilities can be observed moving from Working and agricultural classes to intermediate classes and from the latter to the Bourgeoisie. At higher levels of education class differences become huge: while children of the

¹⁰ As a robustness check, we excluded the first cohort and wave, in order to have a more balanced distribution of cohorts across waves, and included in the model interaction effects between wave and parental class. Results concerning changes in the effects of parental class over cohorts (not shown here for the sake of brevity) remained unaffected. That is, wave effects do not alter the main conclusions of the paper.

Bourgeoisie record an about 70% probability of enrollment, the same figure barely reaches 30% for their Working class counterparts.

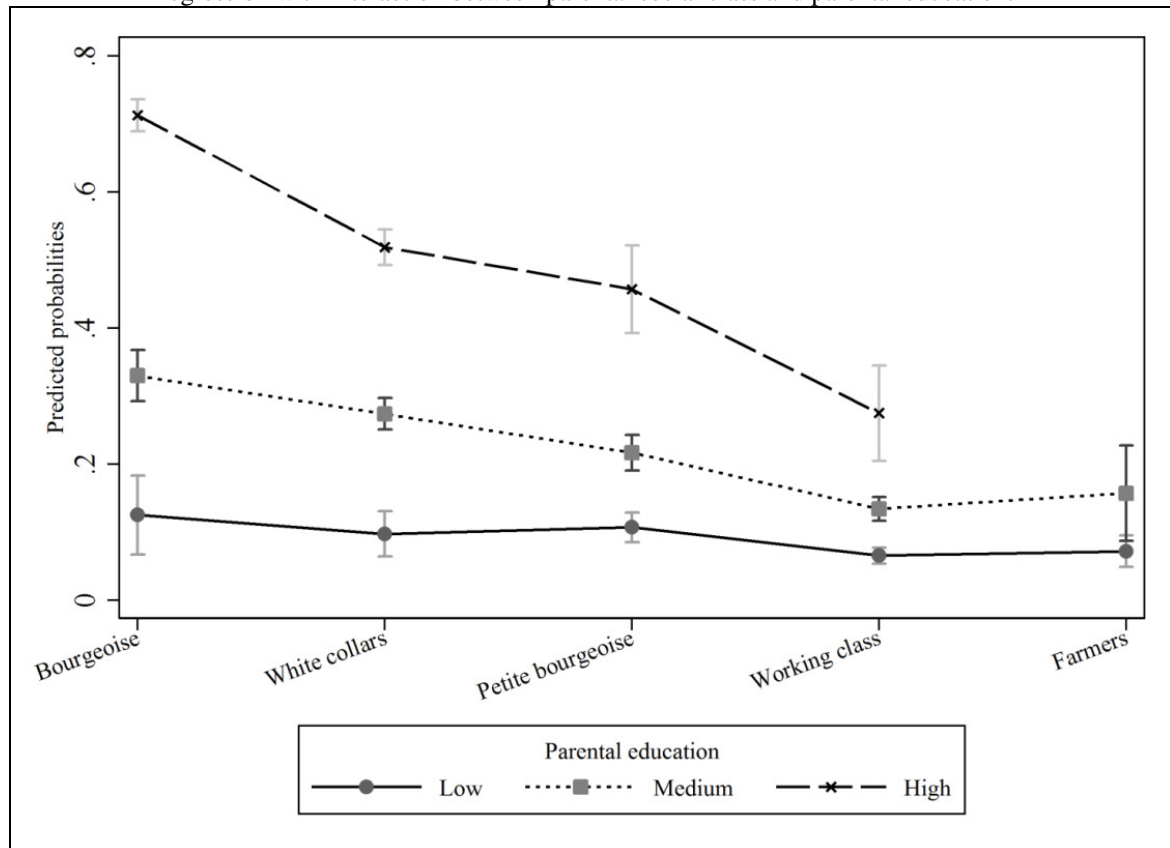
Figure 4. Logit parameters and corresponding standard errors deriving from a multinomial logistic regression to analyze the effects of parental social class on the choice of the academic and technical track, with respect to the vocational one, at different levels of parental education.



Note: the reference category for parental social class is “Bourgeoisie”. The parameters represent interaction coefficients between parental social class and the factor score for parental education.

These results confirm that high parental education is fundamental for children chances of enrolling at the academic track. But the extent to which high parental endowments of educational resources translate into actual children’s enrollments strongly depends on parental social class, i.e. the different capabilities of coping with the direct and indirect costs of tertiary education, as well as different incentives’ structures, as we hypothesized. In fact, an interpretation of the results based on economic resources alone would not explain why, at lower levels of parental education, children of the Bourgeoisie (i.e., entrepreneurs) have almost the same probability to enroll at the academic track of children of the Working class (i.e., unskilled manual workers).

Figure 5. Predicted probabilities of enrolment at the academic track deriving from a multinomial logistic regression with interaction between parental social class and parental education.



Note: the factor score for parental education has been categorized in tertiles. The “Low” category mainly includes parents with at most a primary degree; the “Medium” category mainly includes parents with lower and upper secondary degrees; the “High” category mainly includes parents with an upper secondary and a tertiary degree. The predicted probability for Farmers with high level of parental education is not reported due to the low number of cases (8) belonging to this category.

5. Conclusions

There is a bulk of empirical evidence showing that vertical educational inequalities in Italy slightly decreased during the post-war decades of the “economic miracle” and stabilized afterwards (Barone & Guetto, forthcoming; Triventi, 2014), so that now the country is among the most unequal among industrialized societies (Breen et al., 2009a; Breen & Luijkx, 2004; Nolan et al., 2014). In this paper we focused on individuals belonging to the youngest cohorts and their choices concerning the upper secondary track. The latter is particularly important to explain the persistency of vertical educational inequalities in Italy, given the relatively high level of stratification of the Italian educational system at the upper secondary level. In studying how the relative chances of enrolling in the different tracks have changed for children of different social origins, we differentiated between the effects of parental education and parental class, as well as analyzed how the latter are intertwined in determining children’s track choices.

Our results show a huge educational expansion concerning both overall enrollments at upper secondary schools and the choice of the academic track among young Italians born between 1958 and 1989. Differently from previous studies concerning the Italian case (Pisati, 2002; Panichella & Triventi, 2014), our results show that the expansion involved also the most disadvantaged social classes. However, educational expansion did not translate into a substantial equalization in the relative chances of enrolling in the lycei, neither in terms of parental education nor social class. At the same time, our results do not support the most pessimistic scenario of the EMI hypothesis, as suggested by Panichella & Triventi (2014). On the contrary, a slight process of equalization have concerned children of the White collars, and partly so also the Working class, which have gained a significant advantage, with respect to the Bourgeoisie and the Petite bourgeoisie, in enrolling at technical and academic tracks. However, the overall picture concerning trends over time is that of a substantial inertia in IEO. Our results suggest that policies aimed at rising overall schooling may not be able to reduce relative IEO: the former should be specifically aimed at increasing educational attainment of children with disadvantaged socioeconomic backgrounds (Barone, 2012; Breen and Jonsson, 2007).

Our results also point to a specific pattern of intertwined effects of parental education and class. We hypothesized that parental social class matters more at higher levels of parental education: parents who have reached a high class position without a significant educational investment, as well as parents whose educational investment did not pay off in terms of class returns, have very low incentives in investing on their children's academic education. In fact, our results show that social class inequalities in the relative and absolute chances of enrolling in the academic track are muted at low levels of parental education.

Although our data does not allow for a formal testing, given the limited number of cases across all possible combinations of birth cohort, parental education and social class, the interaction between the latter variables suggests a possible compositional mechanism underlying the persistency of IEO in spite of educational expansion. In fact, when education expands, also the share of high-educated parents increases across cohorts. Since the latter are particularly inclined to invest in their children's academic education only if they belong to the higher classes, this would generate higher class inequalities, potentially counterbalancing equalization trends driven by a more open selection process into the educational system. The increasing prevalence over time of educational homogamy at higher levels of education (Bernardi 2002), a feature common to almost all Western societies (Blossfeld and Timm 2003; Schwartz and Mare 2005), could have further reinforced this process. It is therefore interesting to see whether a similar pattern of results found for the Italian case would emerge analyzing other European countries.

References

- Arum, R., Gamoran, A. & Shavit, Y. (2007). More Inclusion than Diversion: Expansion, Differentiation, and Market Structure in Higher Education. In Y. Shavit, R. Arum & A. Gamoran (Eds.), *Stratification in Higher Education. A Comparative Study* (pp. 1–36). Stanford: Stanford University Press.
- Azzolini, D., & Vergolini, L. (2014). Tracking, inequality and education policy. Looking for a recipe for the Italian case. *Scuola Democratica* 2, published online.
- Ballarino, G., & Schadee, H. (2008). La disuguaglianza delle opportunità educative in Italia, 1930-1980: tendenze e cause. *Polis*, 22, 373–402.
- Ballarino, G., & Schadee, H. (2010). Allocation and distribution: A discussion of the educational transition model, with reference to the Italian case. *Research in Social Stratification and Mobility*, 28, 45–58.
- Bar Haim, E., & Shavit, Y. (2013). Expansion and inequality of educational opportunity: A comparative study. *Research in Social Stratification and Mobility*, 31, 22–31.
- Barone, C. (2009). A new look at schooling inequalities in Italy and their trends over time. *Research in Social Stratification and Mobility*, 27, 92–109.
- Barone, C. (2012). Contro l'espansione dell'istruzione (e per la sua redistribuzione) Il caso della riforma universitaria del 3+2. *Scuola Democratica*, 54-75.
- Barone, C. (2013). L'equità sociale dell'università e la competitività della nostra economia. L'espansione delle lauree è veramente utile? Proposte per investire meglio le risorse pubbliche. *Scuola Democratica*, 2, 567-576.
- Barone, C., Luijckx, R., & Schizzerotto, A. (2010). Elogio dei grandi numeri: il lento declino delle disuguaglianze nelle opportunità d'istruzione in base alle origini sociali nell'Italia contemporanea. *Polis*, 24, 5–34.
- Barone, C., & Guetto, R. (2015). Verso una meritocrazia dell'istruzione? Inerzia e mutamento nei legami tra origini sociali, opportunità di studio e destini lavorativi in Italia (1920-2009). *Polis*, forthcoming.
- Bernardi, F. (2002). La scelta del coniuge. In Schizzerotto, A. (Ed.), *Vite Ineguali. Disuguaglianze e corsi di vita nell'Italia contemporanea*, 317–351. Bologna: Il Mulino.
- Blossfeld, H.-P., and Timm, A. (Eds.) (2003). *Who Marries Whom? Educational Systems as Marriage Markets in Modern Societies*. Dordrecht: Kluwer Academic.
- Brandolini, A. (2005). La disuguaglianza di reddito in Italia nell'ultimo decennio. *Stato e mercato*, 2, 207–230.
- Breen, R., & Jonsson, J.O. (2007). Explaining Change in Social Fluidity: Educational Equalization and Educational Expansion in Twentieth-Century Sweden. *American Journal of Sociology*, 112, 1775-1810.
- Breen, R., & Jonsson, J.O. (2005). Inequality of Opportunity in Comparative Perspective: Recent Research on Educational Attainment and Social Mobility. *Annual Review of Sociology*, 31, 223–243.
- Breen, R., Luijckx, R., Müller, W., & Pollak, R. (2009a). Non-Persistent Inequality in Educational Attainment: Evidence from Eight European Countries. *American Journal of Sociology*, 114, 1475–1521.

- Breen, R., Luijkx, R., Muller, W., & Pollak, R. (2009b). Long-term Trends in Educational Inequality in Europe: Class Inequalities and Gender Differences. *European Sociological Review*, 26, 31–48.
- Breen, R., & Luijkx, R. (2004). Social Mobility in Europe between 1970 and 2000. In R. Breen (Eds.), *Social Mobility in Europe* (pp. 37–76). Oxford: Oxford University Press.
- Breen, R., & Yaish, M. (2006). Testing the Breen-Goldthorpe Model of Educational Decision Making. In S.L. Morgan, D.B. Grusky, & G.S. Fields (Eds.), *Mobility and Inequality. Frontiers of Research in Sociology and Economics* (pp. 235–258). Stanford: Stanford University Press.
- Bukodi, E., & Goldthorpe, J.H. (2013). Decomposing ‘Social Origins’: The Effects of Parents’ Class, status, and Education on the Educational Attainment of Their Children. *European Sociological Review*, 29, 1024–1039.
- Buzzi, C., Cavalli, A., & De Lillo, A. (Eds.) (2007). *Rapporto giovani*. Bologna: Il Mulino.
- Cobalti, A., & Schizzerotto, A. (1993). Inequality of Educational Opportunity in Italy. In H.P. Blossfeld e Y. Shavit (Eds.), *Persistent Inequality: A Comparative Study of Educational Attainment in Thirteen Countries* (pp. 155–176). Boulder: Westview Press.
- Cobalti, A., & Schizzerotto, A. (1994). *La mobilità sociale in Italia*. Bologna: Il Mulino.
- Contini, D. & Scagni, A. (2013). Social Origin Inequalities in Educational Careers in Italy. Performance or Decision Effects? in M. Jackson (Eds.) *Determined to Fail? Performance, Choice and Education* (pp. 149–184), Stanford: Stanford University Press
- Erikson, R., & Goldthorpe, J.H. (1992). *The Constant Flux. A Study of Class Mobility in Industrial Societies*. Oxford: Clarendon Press.
- Ganzeboom, H.B.G. (2005). On the cost of being crude: a comparison of detailed and coarse occupational coding in the issp 1987 data. In J.H.P. Hoffmeyer-Zlotnik & J. A. Harkness, *Methodological Aspects of Cross-National Research* (241-258). Mannheim: ZUMA-Nachrichten [Special Issue #10].
- Ganzeboom, H.B.G., & Treiman, D. (2014). Intergenerational occupational mobility in comparative perspective: explaining cross-national differences and cross-temporal differences and similarities, paper presented at the RC28 meeting, Budapest, 8–10 May.
- Lucas, S.R. (2001). Effectively Maintained Inequality: Education Transitions, Track Mobility, and Social Background Effects. *American Journal of Sociology*, 106, 1642–1690.
- Marzadro, S., & Schizzerotto, A. (2014). More stability than change. The effects of social origins on inequalities of educational opportunities across three Italian birth cohorts. *Scuola Democratica*, 2, 343–364
- Nolan, B., Salverda, W., Checchi, D., Marx, I., McKnight, A., Tóth, I.G., & van de Werfhorst, H.G. (Eds.) (2014). *Changing Inequalities and Societal Impacts in Rich Countries. Thirty Countries' Experiences*. Oxford: Oxford University Press.
- Panichella, N., & Triventi, M. (2014). Social inequalities in the choice of secondary school: Long-term trends during educational expansion and reforms in Italy. *European Societies*, 16, 666–693.
- Pellizzari, M and Orsini, J. (2012). *Dinastie d'Italia*. Milano: Università Bocconi Editore.
- Pisati, M. (2002). La partecipazione al sistema scolastico. In A. Schizzerotto (Eds.), *Vite Ineguali. Disuguaglianze e corsi di vita nell'Italia contemporanea* (141–186). Bologna: Il Mulino.

- Recchi, E., (2007). Italy: Expansion, Reform, and Social Inequality in Higher Education. In Y. Shavit, R. Arum, & A. Gamoran (Eds.), *Stratification in Higher Education: a Comparative Study* (pp. 400–420). Stanford: Stanford University Press.
- Rosina, A. & Fraboni, R. (2004). Is marriage losing its centrality in Italy?. *Demographic Research*, 11, 149–172.
- Schizzerotto, A., & Marzadro, S. (2008). Social Mobility in Italy since the Beginning of the Twentieth Century. *Rivista di politica economica*, 98, 5–40.
- Schwartz, C.R., & Mare, R.D. (2005). Trends in Educational Assortative Marriage from 1940 to 2003”. *Demography*, 42 (4), 621–646.
- Shavit, Y., & Blossfeld, H.P. (Eds.) (1993). *Persistent Inequality: Changing Educational Attainment in Thirteen Countries*. Boulder: Westview Press.
- Shavit, Y., Yaish, M. & Bar-Haim, E. (2007). The Persistence of Persistent Inequality. In S. Scherer, R. Pollak, G. Otte & M. Gangl (Eds.), *From Origin to Destination. Trends and Mechanisms in Social Stratification Research*. Campus: Frankfurt a. M. and New York.
- Triventi, M., Panichella, N., Ballarino, G., Barone, C., & Bernardi F. (2015). Education as a positional good: Implications for social inequalities in educational attainment in Italy. *Research in Social Stratification and Mobility*, forthcoming.
- Triventi, M. (2014). Le disuguaglianze di istruzione secondo l’origine sociale. Una rassegna della letteratura sul caso italiano. *Scuola Democratica*, 2, 321–341.