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Proceedings of the 1st International Conference of the Journal Scuola Democratica

EDUCATION AND POST-DEMOCRACY

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VOLUME II

Teaching, Learning, Evaluation and Technology

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**ASSOCIAZIONE "PER SCUOLA
DEMOCRATICA"**

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***Title* Proceedings of the First International Conference of the Journal "Scuola Democratica" - Education and Post-Democracy VOLUME II Teaching, Learning, Evaluation and Technology**

This volume contains papers presented in the First International Conference of the Journal "Scuola Democratica" which took place at the University of Cagliari on 5-8 June 2019. The aim of the Conference was to bring together researchers, decision makers and educators from all around the world to investigate the concepts of "education" in a "post-democracy" era, the latter being a set of conditions under which scholars are called to face and counteract new forms of authoritarian democracy.

Populisms, racisms, discriminations and nationalisms have burst and spread on the international scene, translated and mobilized by sovereigntist political movements. Nourished by neo-liberalism and inflated by technocratic systems of governance these regressive forms of post-democracy are shaping historical challenges to the realms of education and culture: it is on this ground, and not only on the political and economic spheres, that decisive issues are at stake. These challenges are both tangible and intangible, and call into question the modern ideas of justice, equality and democracy, throughout four key dimensions of the educational function, all of which intersected by antinomies and uncertainties: ethical-political socialization, differences, inclusion, innovation.

The Conference has been an opportunity to present and discuss empirical and theoretical works from a variety of disciplines and fields covering education and thus promoting a trans- and inter-disciplinary discussion on urgent topics; to foster debates among experts and professionals; to diffuse research findings all over international scientific networks and practitioners' mainstreams; to launch further strategies and networking alliances on local, national and international scale; to provide a new space for debate and evidences to educational policies. In this framework, more than 600 participants, including academics, educators, university students, had the opportunity to engage in a productive and fruitful dialogue based on researches, analyses and critics, most of which have been published in this volume in their full version.

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Premise

Since 1973, with Chile's Dictatorship as a neoliberal 'laboratory', it's more than 45 years that the Global Education Reform Movement has transformed educational systems all around the world through a discourse rooted on epistemic and ideological hegemonies. A new 'truth' of the homo economicus as able to rationally and freely pursue its interest as self-entrepreneur is relentlessly spreading: the Human Capital paradigm then connects individualistic choices and personal skills to impose diverse educational tracks through a Life-Long-Learning investment. Thus, the restructuring of the Education State, thanks to policies of privatization, competition and high stakes accountability, has implied a new ethics challenging social justice ideals.

The massification of educational systems in Europe and worldwide, together with the increasing demand for their democratization, have profoundly challenged traditional teaching models: the lecture, the magister teacher and the specific spatial-temporal devices aimed at disciplining students according to the needs of a Fordist capitalist society and to the reproduction of class inequalities. Starting particularly from the Fifties in schools, and more recently in higher education, new teaching-learning configurations have been explored and developed: situated and participatory didactics aimed at involving students in a reflexive relationship with knowledge and social reality; new ways of hybridizing formal and informal learning; new pedagogies exploiting the possibilities inscribed in new medias and digital technologies. These practices, sometimes radically, reverse theory and practices in order to develop student-centred learning processes. The thematic sessions within this stream explore the challenges, tensions, ambivalences and potentialities of pedagogies and didactics innovations involving school and university teachers, students, as well as their surrounding environments: the physical, architectural, material and technological spaces that constitute a crucial component of situated learning processes.

The relation between education systems and policy making changed in the last decades, consequently to three innovations sharing the common paradigm of evaluation, namely: the establishment of national/international large-scale testing, the diffusion of systems assessing schools' and the raising interest for efficacy and cost-effectiveness of education interventions. These innovations have been highly debated from different and controversial perspectives. The aim of the conference stream is to collect papers focused on actual uses of different forms evaluation, in order to overcome previous ideological oppositions, contributing to move the debate into a more pragmatic and fruitful phase.

Further issue: How is digital technology changing education? Online schools and classes are becoming widely available; backpack of many

high school and college students, instead of physical textbooks, are now carrying iPads and various forms of devices connected to online; teachers now have more ability to personalize lessons, instructions, and projects for each group or student; by using devices and programs to distribute classwork and assignments, they can even personalize lessons and focus on the work of each student; increased opportunities and constraints for students to collaborate together from a variety of places becomes possible; free online classes called "MOOC's" otherwise known as Massive Open Online Courses are becoming widely popular. Finally, a mounting set of variegated pressures to produce pedagogical innovation in teaching and learning is being addressed to teacher and school staffs. Even the governance of school system and school-daily life as a whole is undergoing a wide process of digitalization. But what does the increase in digital technology and approach mean for the current times? Although many advantages come with digitalized learning, there are also disadvantages that researchers, educators, academics and professionals are aware of, including and not limited to minimal to zero face-to-face interaction in the classroom and the lack of ability to work in person with study partners and teachers. Any conversation that does not include the potential dangers of the widespread use of technology would not be complete. Therefore, the stream focuses also on the interplay between learning theories and technologies. Both learning theories and tools are composed of multiple attributes, and they refer to many aspects and facets which render educational technology highly complex. Evolution in both theory and technology reflects no clear successive breaks or discrete developments, rather, waves of growth and accumulation. Evolutions in society and education have influenced the selection and use of learning theories and technologies; learning theories and technologies are situated in a somewhat vague conceptual field; learning theories and technologies are connected and intertwined by information processing and knowledge acquisition; educational technologies shifted learner support from program or instructor control toward more shared and learner control; and learning theories and findings represent a fuzzy mixture of principles and applications.

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The Complex Chains of Education Inequalities in Italy. Understanding Interplays between Ascriptive and School-Tracks Factors

Orazio Giancola, *Sapienza, Università di Roma*

orazio.giancola@uniroma1.it

Luca Salmieri, *Sapienza, Università di Roma*

luca.salmieri@uniroma1.it

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1. Aims and scope

The issue of stability and change in educational inequalities over time is a classic topic in sociology of education and a substantial issue of the long tradition of sociological studies on stratification and social mobility. In addition to the classical statistical analyses estimating the effects of ascriptive variables such as class, social, cultural and economic inherited capitals on educational attainments (Shavit, Blossfeld, 1993; Breen, Jonsson, 2005), data availability from test based large-scale international assessments (OECD-PISA, PIAAC, IEA, TIMMS etc.) have paved the way to new research approaches to gauge and compare the impacts of other relevant factors. One of the most crucial opportunity is to calculate the effects of the outlined variables non only on the level and field educational attainments, but also on learning outcomes conceived as a set of learned skills measured via standardized items, ordered via numerical scores and ranked along a scale of quantified values (Barone, 2006; Martins, Veiga, 2010; Giancola, Viteritti, 2014; Oppedisano, Turati, 2015).

In this paper, we comment findings from multiple estimations and correlations statistically obtained in order to assess the effects of ascriptive variables on educational inequalities among Italian students' achievements measured via OECD PISA scores in school skills and educational expectations. Additionally, we split the effects deriving from ascriptive variables and those from students' track choices among the three upper secondary options available: *liceo* (lyceum), *istituto tecnico* (technical track) and *istituto professionale* (professional track). We aim at finding out social and educational mechanisms generating differentials in skills outcomes and at intercepting and evaluating the influence of ascriptive variables on track choices.

In a separate analysis, we assess the impact of both type of variables – social origins and track choices – on skills scores obtained by 15 years-old students after PISA tests in reading, mathematics and science, by employing all the available PISA waves.

Finally, we compare the effects of ESCS, of ESCS controlled by PISA test scores in reading, mathematics and science and of ESCS controlled by scores and school-track on students' propensity to enrol in tertiary education. ESCS is the PISA index of economic, social and cultural status, created using student reports on parental occupation, combined with the highest level of parental education and a sub-index of home possessions related to family wealth, home educational resources and the availability of 'classical' cultural items such as classical literature, books of poetry, and works of art.

Several surveys relying on data from PISA or INVALSI already proved that the variation in test scores by Italian upper secondary students depend more on

school track choices and lesser on social origin, usually measured by the ESCS index (Giancola, Fornari, 2011; Contini, Scagni, 2013; Azzolini, Vergolini, 2014; Giambona, Porcu, 2015; Barone, Ruggera, 2018; Pensiero *et al.*, 2019). Nevertheless, what available studies do not tell so far is whether and at what extent the influence of social origin both on school track choices and on test scores has been changing over time, from a generation to the next. Previous studies do not state whether social origin and educational choice generating separate as well as joint effects have increased, decreased or stabilized over time. Our paper seeks to answer to these questions for the period 2000-2015.

2. Data and methods

We relied on data of the Italian national samples from the six first OECD-PISA waves of test assessment, which have been conducted in 2000, 2003, 2006, 2009, 2012 and 2015. A robust statistical probe based on national data on enrolment rates in first and second year of upper secondary education is the basis to observe changes occurred in the distribution of students among Italian upper secondary tracks. We thereafter show changes and continuities in the ratio distribution of students among school tracks considering the reform occurred in 2010. The reform enacted in from school year 2010/2011 and the process ended in school year 2014/2015, when the new system was completed for all grades: curricula in *licei* have been revised, adding specific learning objectives for each type of *liceo* and detailed learning rationales that students are expected to acquire as the basis for implementing competences. *Istituti tecnici* (technical institutes) have been rationalized into economics and technology sectors, with 2 economics-based programmes and 9 different technology-based programmes, resulting in 11 different options. *Istituti professionali* (vocational institutes) offer vocational education in the service sector, the industry and crafts sectors, with 4 service sector programmes and 2 industry and crafts programmes. One of the semi-hidden rationale of the reform was to mitigate the unbalance in terms of status, prestige and hence qualities of teaching between the higher social ranked *licei* and the stigmatised lower census image of technical and vocational tracks (*istituti tecnici* and *istituti professionali*) by promoting a wider bulk of educational offers from the formers in order to intercept students from a wider spectrum of social classes and a straightened quality learning in the latter.

In order to observe the strength of effects of social origin, gender, geographical macro-areas, native or foreign background on school track choices, we developed a binomial logistic regression model for each of the six wave-database. We then conducted a diachronic analysis of the effect of the same independent variables and of the track choice on students' scores on standardized tests (OLS regressions per wave). That analysis assessed whether and how much the variation in the allocation of students among the three tracks are correlated to higher or lower scheme of reproduction of inequalities in students' scores or at the opposite to significant changes in the relation between ascriptive versus school-tracks variables.

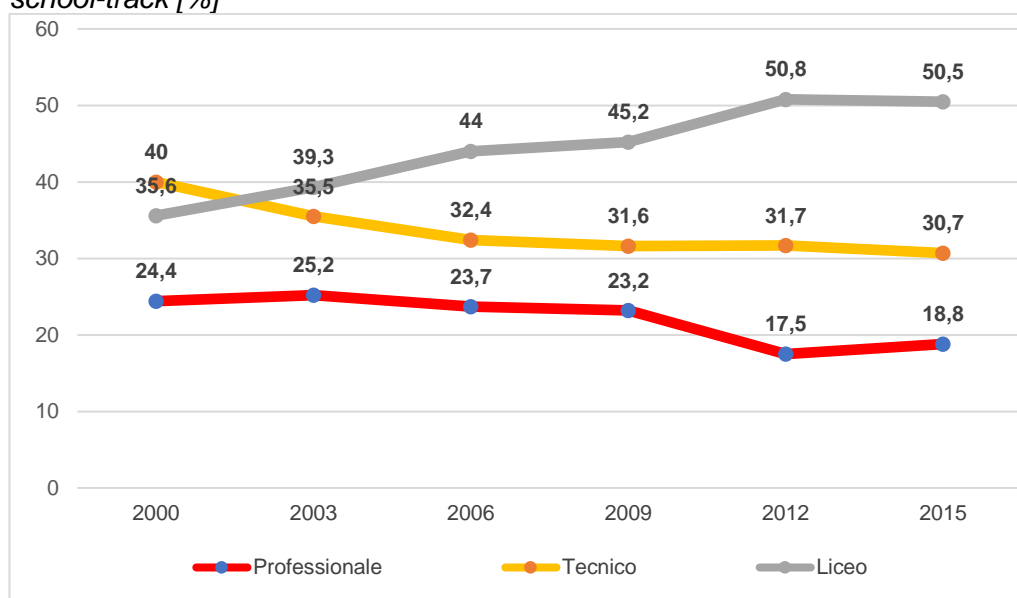
Thereafter, regression models have been developed for each wave. The first model uses a topic skill – reading – as a dependent variable and two other skills in rotation: mathematics and science. Each model is replicated 3 times and works on social backgrounds as independent variables. The second model shows how the effect of social backgrounds varies over time when the school track variable is added to social backgrounds.

3. Findings

The enrolment data among the three tracks of the Italian upper secondary schools in the period 2000-2015 show a steady growth in attractiveness by *licei* at the expenses of *istituti tecnici* and *istituti professionali* (Figure 1). *Licei* counted for the 35.6% of all the enrolments in upper secondary school in 2000 when *Istituti tecnici* attracted a higher share (40%) and *Istituti professionali* the remaining 24.4%. Fifteen years later the distribution reversed: *licei* were gone at half of the student population (50,5%) while *Istituti tecnici* and *Istituti professionali* were both declined, respectively down at 30,7 and 18,8%.

The steady growth in the number of students enrolling in *licei* implies a plausible 'democratization' of the population of this school track. This phenomenon confirms the strength of social imitation and the diffusion, transversal to social classes, of the expectation that *licei* offer a better social environment and the first step toward social mobility (Checchi, Flabbi, 2007; Ballarino et al., 2008; Panichella, Triventi, 2014).

FIGURE 1. Italian students enrolled in upper secondary education by years and school-track [%]

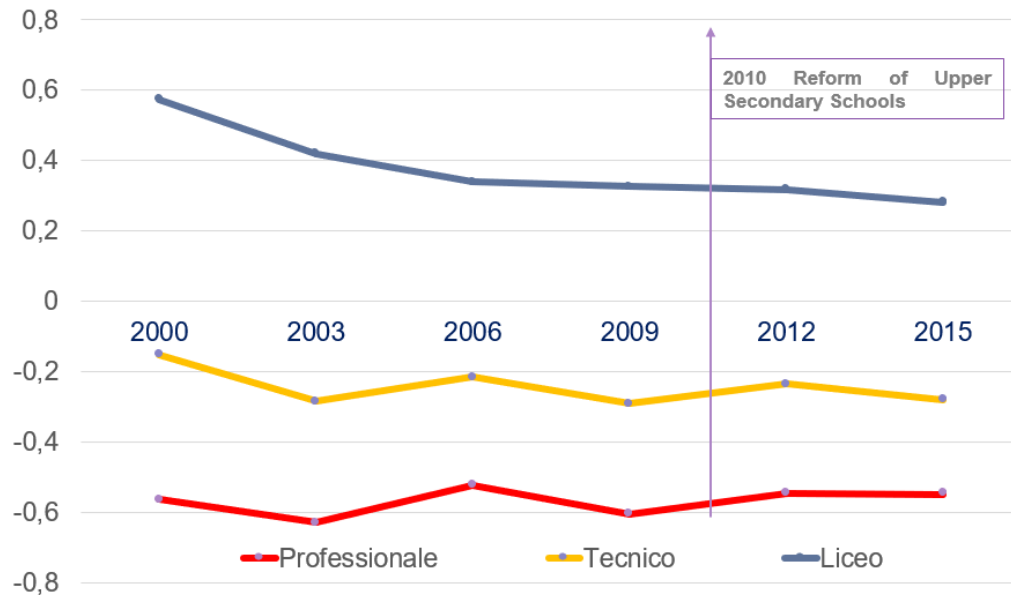


source: elaboration by authors.

Nevertheless, the enlargement of the student population attending *licei* does not automatically imply that the whole tracking system is moving toward social heterogeneity. Instead, it may well be that the proportion of *licei* students grows over time as more and more middle- and high-class families drive their children towards this kind of upper secondary school, increasingly shaping the family choice as a process of class connotation.

By measuring social heterogeneity via ESCS Index from PISA student population (average values of ESCS in the tracks), we find out that the 2010 reform reorganizing *licei*, *istituti tecnici* and *istituti professionali* has had a redistributive effect for *licei*, but not so much for *istituti tecnici* and *istituti professionali*, as Figure 2 reveals. Putting it be more correctly, social heterogenization at *licei* have been in place since before the 2010 reform, following a trend independent from educational policies, while enrolments in *istituti tecnici* and *istituti professionali* in relation to ESCS index have been fluctuating with ups and downs.

FIGURE 2. Italian school tracks' social heterogeneity measured via ESCS Index by PISA waves. Standard deviations

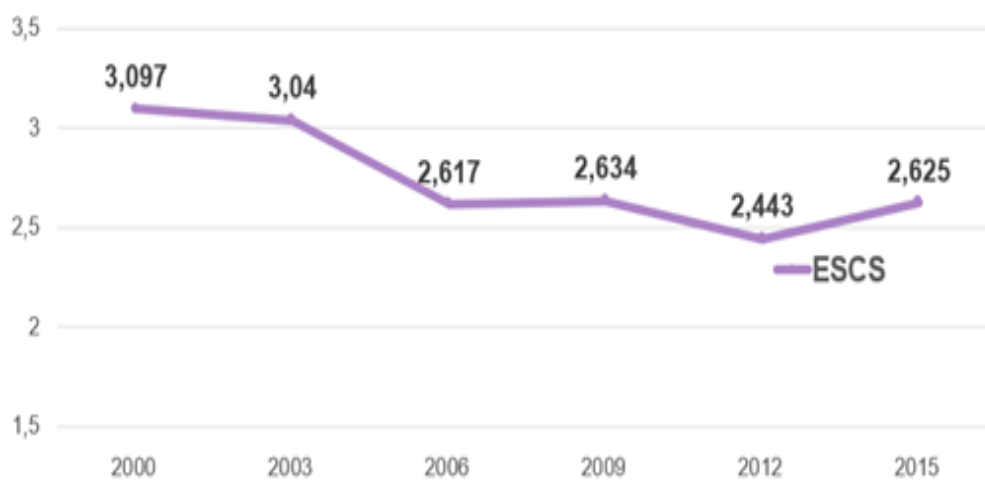


source: elaboration by authors on PISA data

Binomial logistic regression models allow to substantiate the effect of social origin, gender, native or non-native background and geographical area on school choices. Findings in this regard prove that the odds of enrolling in *licei* still depend mainly on social origin and that the influence of social background has remained quite strong and quasi-stable over time (Figure 3).

We are not able to assess a direct and evidence-based effect of the 2010's reform on the odds of enrolling at *licei* according to social origin, but Figure 3 shows that social origins counted more for the 2015 than for the previous 2012 enrolment cohort. It might be that the 2010's reform has had merely a short-term effect on heterogenization.

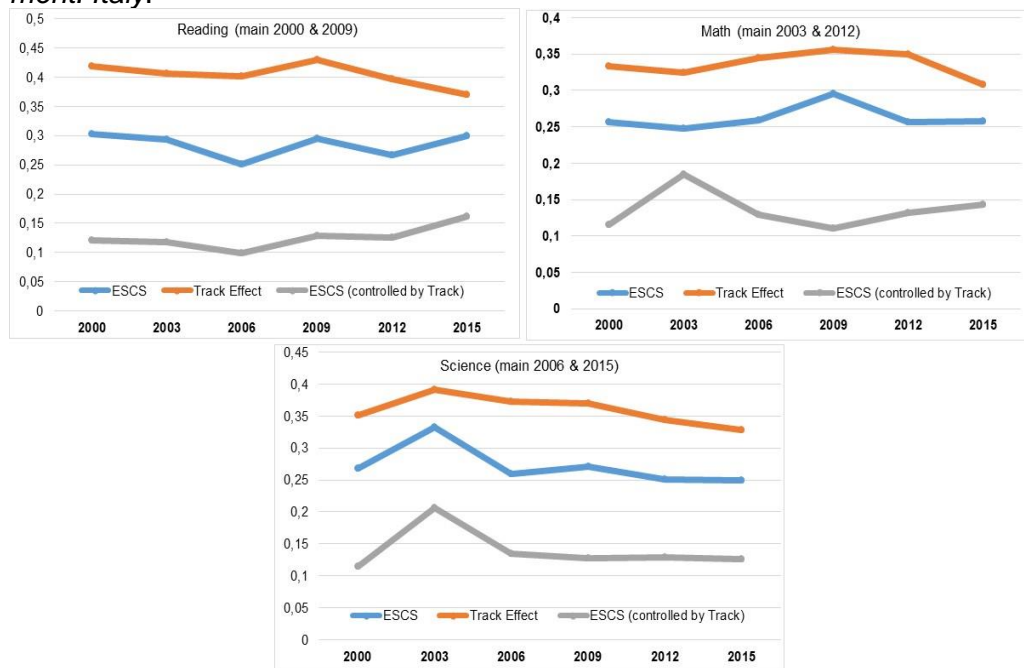
FIGURE 3. Odds produced by social origin (net effect) in enrolling in liceo by year of enrolment. Italy



source: elaboration by authors on PISA data

Attending *liceo* rather than *istituto tecnico* or *istituto professionale* entails a greater probability to score higher at PISA tests on reading, mathematics and science even if this correlation is declining over time as Figure 4 shows. Is this decline partly explained by the social heterogenizations going on at *licei*? It may be a realistic composite effect which need to be explored. But, if we look at the effect of social class (ESCS Index) controlled by school track on text scores, we have a reverse picture, where a rising trend over time is at play (except for science). The school track effect is quite constant over time (except anomalies resulting from the 2003 wave).

FIGURE 4. Effects of ESCS, of ESCS controlled by school track and of being at liceo, on PISA scores in reading, mathematics and science by year of enrolment. Italy.

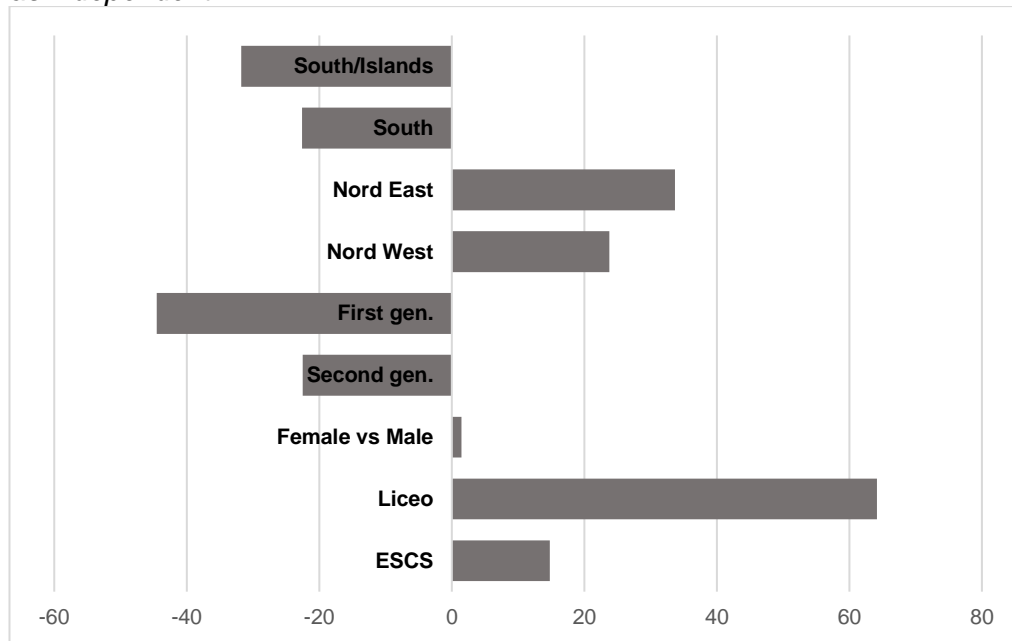


source: elaboration by authors on PISA data

Overall, therefore, we observe: *i*) a significant effect of social origin (ESCS) on the scores obtained by upper secondary students in reading, mathematics and science; *ii*) an even greater effect exercised by the school-track on scores; *iii*) still a remarkable effect produced by social origin on scores once the school track effect is controlled. It is then clear that a chain effect is at work: social origins affect learning outcome both as a driver of social, cultural and economical capital transmitted to students and as pattern of social influence on school choice.

Due to lack of space, we cannot show all the single regression models contributing to the graphs in Figure 4. However, for the sake of completeness, we give at least the example of the multiple linear regression model performed on the 2015 scores for 'reading topic (Figure 5). Complementary to the previous ones, the analysis illustrates the net joint effect of the variables assumed as independent in the models used for the diachronic representation (again, see Figure 4). Since PISA scores are calculated on a standardized scale, it is possible to graphically represent 'how much' a variable (or one of its modes) adds or removes a student's starting score in terms of PISA results. Findings show a very clear explanatory structure: the foremost effects are those produced by territorial gaps, migration background and social origin. But, once more, above all, the effect of the school track stands out.

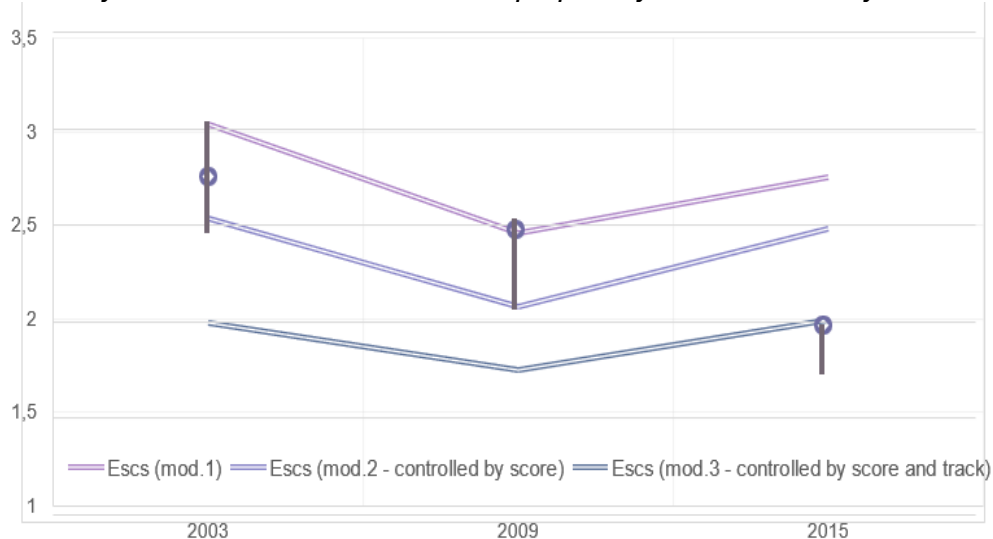
FIGURE 5. *Effects (as PISA score) on reading score of the variables assumed as independent*



source: elaboration by authors on PISA data (2015, 'reading' score)

Analysis aimed at configuring the combined impact of all the observed variables on students' training prospects have been carried out too, in order to assess the students' propensity to enroll in university courses after completing the upper secondary school (Figure 6). Operating logistic regression models, ascriptive variables are adopted as independent in a first round. Then the relation is controlled for scores at tests. Finally, the relation is controlled for school track.

FIGURE 6. *Effects of ESCS, of ESCS controlled by scores and of ESCS controlled by scores and school track on the propensity to enrol in tertiary education.*



source: elaboration by authors on PISA data 2003, 2008, 2015

In Italy the expectation to enroll in tertiary education is a matter of social class: the higher the ESCS index, the more likely the propensity to attend university

and that is true even after controlling between scores at tests in reading, mathematics and science and those score and school-track together.

Obviously, from a wave to another, results are heavily affected by students' anticipated replies on expectation to enrol in tertiary education (replies are irregular over time). However, the relevant finding is not the intertemporal deviation of the betas on the single trend (the dependent variable is a categorical with deep variation in the distribution over time), but rather the distances from one beta to another in the same wave. As illustrated by the model three and reported in the graph, an important part of the propensity to enroll in university courses – even more important than the performance measured by test scores – is explained by the type of school attended by the student, also considering the reduction of the ESCS effect absorbed by the school track.

Conclusions

We can conclude remarking that in Italy social origins still explain a great amount of school tracks choices in upper secondary school tracks. *Liceo* keeps on preserving a selective effect on students' prospects via social origins, even if this effect seems to start being stronger via students' scores rather than rates of enrolment, as it has been up to the recent past. However, the Italian 2010's reform of the upper secondary school system, aiming at de-marginalize technical and professional school tracks, does not seem to have reached the goal.

Mechanisms of variance between schools via 'track choice' appear to be relevant, working as a strong signal of social segregation.

Overall, once again tested, the Italian education system still has strong traits of inequity and marked inequalities. In the presentation of the empirical results, we have willingly omitted the Italian positioning in the international rankings which is low. If we instead consider equity, still we find that the territorial divides, social and intergenerational disparities, effects of the migration background (and therefore the lack of inclusiveness), context effects are strong and evident.

The analyses illustrated that there is a clear causal chain linking the social origin to the choice of the school track; subsequently the scholastic tracking shows its effect in terms of difference between the social composition of the various types of school. The type of school attended, then, strongly affects students' cognitive results (together with other individual and contextual variables). In the last step of the chain, the type of upper secondary school, the social composition of the school, the social origin of the student, together affect the propensity to undertake a university study course.

Concluding, the structure of the upper secondary school, subdivided into educational tracks and curricula 14 years old students are called to choose, is one of the key junctions where social inequalities come at play. Despite several empirical evidences, it does not seem to be an issue for public debate.

References

- Azzolini, D., Vergolini, L. (2014), «Tracking, inequality and education policy. Looking for a recipe for the Italian case», *Scuola democratica*, 2, <https://www.rivisteweb.it/download/article/10.12828/77686>
- Ballarino, G., Bernardi, F., Requena, M., Schadee, H. (2008), «Persistent inequalities? Expansion of education and class inequality in Italy and Spain», *European Sociological Review*, 25(1), pp. 123-38.

- Barone, C. (2006), «Cultural Capital, Ambition and the Explanation of Inequalities in Learning Outcomes: A Comparative Analysis», *Sociology*, 40(6), pp. 1039-58
- Barone, C., Ruggera, L. (2018), «Educational equalization stalled? Trends in inequality of educational opportunity between 1930 and 1980 across 26 European nations», *European Societies*, 20(1), pp. 1-25,
- 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, pp.223-43
- Checchi, D., Flabbi, L. (2007), *Intergenerational mobility and schooling decisions in Germany and Italy: The impact of secondary school tracks*, IZA DP N. 2876, pp. 1-63.
- Contini, D., Scagni, A. (2013), «Social-origin inequalities in educational careers in Italy. Performance or Decisions Effects?», in M. Jackson, (eds), *Determined to Succeed? Performance versus Choice in Educational Attainment*, Standford, CA: Standford University press, pp. 149-83
- Giambona, F., Porcu, M. (2015), «Student background determinants of reading achievement in Italy. A quantile regression analysis», *International Journal of Educational Development*, 44, pp. 95-107.
- Giancola, O., Fornari, R., (2011), «Policies for decentralization, school autonomy and inequalities in educational performance among the Italian regions. Empirical evidence from Pisa 2006», *Italian Journal of Sociology of Education*, 8(2), pp. 150-72.
- Giancola, O., Viteritti, A. (2014), «Distal and Proximal Vision: a multi-perspective research in sociology of education», *European Educational Research Journal*, 13(1), pp.47-57
- Hanushek, E. A., Wößmann, L. (2006), Does educational tracking affect performance and inequality? Differences-in-differences evidence across countries», *The Economic Journal*, 116(510), C63-C76.
- Martins, L., Veiga, P. (2010), «Do inequalities in parents' education play an important role in PISA students' mathematics achievement test score disparities?», *Economics of Education Review*, 29(6), pp. 1016-33.
- Oppedisano, V., Turati, G. (2015), «What are the causes of educational inequality and of its evolution over time in Europe? Evidence from PISA», *Education Economics*, 23(1), pp. 3-24
- 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(5), pp. 666-93.
- Pensiero, N., Giancola, O., Barone, C. (2019), «Socioeconomic Inequality and Student Outcomes in Italy», in L. Volante. S. Schnepf, J., D. Klinger, (eds) *Socioeconomic Inequality and Student Outcomes. Education Policy & Social Inequality*, Singapore: Springer, pp. 81-94
- Shavit, Y., Blossfeld, H. P. (1993), *Persistent Inequality: Changing Educational Attainment in Thirteen Countries*, Boulder, Colorado: Westview Press.

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