Geographical Marginality, Secondary School Supply and Inequalities of Educational Opportunities. The Italian case

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Research on inequalities of educational opportunities has largely shown that individuals from different social backgrounds have different chances to attain the highest levels of education and access the most prestigious educational tracks and fields of study. In Italy, for example, students from low family backgrounds have systematically lower probability of enrolling in upper secondary education as well as lower probability of choosing the academic track (liceo classico and liceo scientifico), i.e., the most prestigious and demanding track that is crucial for the enrolment in tertiary education (Panichella and Triventi 2014). Despite these well-documented inequalities, there is a surprising lack of research on the role of spatial arrangements and geographical inequalities, especially in Italy, where there are large and unexplored disparities between "central" and "marginal" areas that go beyond traditional rural/urban and North/South divides (Moretti 2012; Chetty et al. 2014).

This study aims to fill this gap by investigating whether inequalities of educational opportunities differ between "central" and "marginal" areas in Italy. Specifically, the research examines how living in a specific geographical area affects high-school track placement and whether students from different social backgrounds are more or less sensitive to contextual influences. The study also analyzes whether students living in marginal areas are less likely to enroll in academic courses, given that these schools are more widespread in large cities and urban centers.

We used pooled quarterly data from the Italian labour force survey (ILFS), for the years from 2005 to 2020. The ILFS is a nationally representative survey of Italian households carried out by the Italian National Institute of Statistics (ISTAT) on all household members aged at least 15. This survey includes detailed information on the household structure and the characteristics of their members (e.g. sex, age, education and occupation), allowing to reconstruct the social origin (i.e., parental education) of those still living with the parents. Our analytical sample consists of 323,511 individuals aged 15 to 17.

The dependent variables are two measures of educational attainment: (a) the probability of being enrolled in a 5-year upper-secondary school; (b) the probability of being enrolled in the two most prestigious curricula of the academic track (liceo classico and liceo scientifico). As for the independent variables, we focus on a) one micro-level variables, namely parental education (constructed with the dominance principle), and b) two macro-level (i.e., province level) variables, measuring the

degree of ‘marginality’ of each province and the availability of academic high-schools, respectively. The first macro-level variable is constructed as the percentage of municipalities defined as marginal (inland) in each province, i.e. municipalities that are more than 20 minutes away from a municipality (‘pole’) offering simultaneously a hospital, a railway station and a full secondary education supply (see Barca et al. 2014). The second refers to the share of academic upper secondary schools in each province. Models also control for the following micro-level variables: sex, macro-area of residence, age, year of survey and a dummy distinguishing those born abroad.

To exploit the hierarchical structure of the data, we estimate multilevel models, adopting a three-step empirical strategy. The first step estimates the association between the degree of marginality and the educational outcomes, whereas the second controls this association by the share of academic schools. The third step augments these models with a cross-level interaction between parental education and the macro-level variables, to study if inequalities of educational opportunities change according to contextual factors.

We expect that living in provinces with high degree of marginality reduces the opportunities to both enrolling upper secondary school and choosing the most prestigious academic track. Part of the disadvantage of inhabitants of marginal areas in the horizontal dimension of education is expected to depend on the scarce availability of academic courses. Finally, we hypothesize that the inequalities of educational opportunities (i.e., the disadvantage of individuals from low social backgrounds) are higher in those provinces with higher degree of marginality and lower availability of academic upper secondary schools.to best students’ outcomes.