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Regional Disparities, Geographical Marginality, and Educational Pathways: A Study on Upper Secondary Education in Italy

Stefano Cantalini, Nazareno Panichella, Andrea Pietrolucci, and Moris Triventi

Department of Social and Political Sciences, University of Milan, Italy

Correspondence: Stefano Cantalini (stefano.cantalini@unimi.it)

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Abstract

This study examines the role of geographical location for educational outcomes in Italy, analysing variations between "central" and "marginal" areas in high school enrolment, dropout rates, and academic track placement. Drawing on data from the Italian Labour Force Survey (2005–2014) and INVALSI (2017–2018 and 2018–2019), the findings indicate that geographical marginality is only moderately associated with educational outcomes, especially in comparison to the more pronounced South–North divide. The analysis of non-enrolment reveals notable regional variations. In marginal areas of the North, non-enrolment in five-year secondary programmes is often offset by a higher prevalence of enrolment in three-year vocational schools. Conversely, the findings suggest a "protective effect" of marginality in southern regions, where students in marginal areas exhibit lower dropout rates and a higher likelihood of enrolling in the academic track compared to their peers in central areas. The results indicate that in the South, geographical marginality accentuates the dichotomy between non-enrolment and academic track enrolment, particularly favouring the choice of enrolling in a lyceum over other options.

Keywords

geographical inequalities; geographical marginality; inequality of educational opportunities; Italy; tracking; upper secondary education

1. Introduction

The geographical dimension of social stratification and educational inequalities has been central to sociological research (Blau & Duncan, 1967; Sorokin, 1927). However, over time, analyses of geographical

inequalities faded from the academic spotlight. Only recently, with the emergence of new forms of inequality due to globalisation and technological shifts (Moretti, 2004), as well as to the upgrading of the occupational structures in the most developed areas (Avola et al., 2024; Oesch, 2013), this issue re-emerged as a focal point in scholarly discourse, and several studies have examined whether individuals living in specific geographical areas experience divergent outcomes in the labour market, including subjective social status (Vigna, 2023), social mobility (Bell et al., 2023; Connor & Storper, 2020; Morris, 2023), school-to-work transitions (Scandurra et al., 2020), and returns to education (Panichella et al., 2024).

Despite progress in understanding how geographical marginality affects labour market outcomes, much less is known about how these geographical inequalities shape educational opportunities and reinforce educational disparities. However, exploring the intersection between geographical and educational inequalities is essential, as different areas exhibit distinct socio-economic characteristics that shape the composition of classrooms and peer groups (Wells et al., 2023), thereby influencing academic achievement (Willms, 2010). Furthermore, school quality varies significantly across geographical regions (Johnson, 2012), as does the availability of employment opportunities (Panichella & Triventi, 2014), both of which unevenly affect educational choices and opportunities. In this regard, marginalised regions are often characterised by lower proportions of highly educated and skilled individuals (Panichella et al., 2024), a limited availability of educational institutions—both in terms of quantity and quality (Lucatelli, 2015)—and weaker employment prospects (Panichella & Cantalini, 2023). These factors collectively hinder educational opportunities and outcomes for young people residing in such areas. Additionally, living in marginalised regions has been linked to an increased risk of youth disengagement from education (Rønningstad, 2025), exacerbating the likelihood of school dropout and negatively impacting well-being and behavioral outcomes (Henry et al., 2012).

This article seeks to contribute to this debate by examining the relationship between geographical marginality and educational opportunities in Italy, focusing on the transition from lower to upper secondary school—a critical stage for studying educational inequalities and, more broadly, the intergenerational reproduction of social inequalities (Triventi, 2014). Specifically, this study investigates how geographical location influences students' likelihood of enrolling in upper secondary school, their risk of dropping out, and their placement in academic or vocational tracks. Rather than directly analysing the mechanisms underlying this association, it represents a first step in understanding the extent to which geographical marginality shapes educational opportunities in Italy.

Italy presents a distinct case for studying the role of geographical disparities in educational outcomes and, more broadly, social inequality. Among economically advanced nations, Italy stands out for its severe and persistent regional economic disparities, especially along the North–South divide (Avola, 2017). Southern Italian regions consistently emerge as disadvantaged across multiple indicators (Cersosimo & Nisticò, 2013). For instance, while employment rates in Northern regions align with the EU27 average, many Southern regions—particularly Sicily, Calabria, and Campania—rank among the European regions with the lowest levels of employment. Furthermore, while the Centre-North region has experienced an expansion in occupations typical of industrial and post-industrial economies, processes of industrialisation and tertiarisation in the South have remained incomplete (Panichella, 2014). Moreover, the gap between the North and South has recently widened, with the South increasingly facing risks of economic and demographic decline (Associazione per lo sviluppo dell'industria nel Mezzogiorno, 2014).

Over time, these disparities have reshaped the territorial divides that have historically defined Italian society (Viesti, 2021). While previous research has explored educational differences across Northern, Central, and Southern Italy (Ballarino et al., 2014), this article offers a fresh perspective by focusing specifically on how educational opportunities vary between "marginal" and "central" areas, moving beyond the traditional North–South lens. Compared to central areas, marginal areas in Italy face greater challenges such as depopulation, limited economic opportunities, and declining social services. These issues are particularly pronounced in the South—where the majority of marginal areas are concentrated—compared to the North, which benefits from specific mechanisms and institutional assets that can help mitigate the disadvantages associated with geographical marginality (Panichella et al., 2024). Building on this, our study also examines how these two geographical dimensions—marginality and the North–South divide—interact to shape heterogeneous student educational trajectories.

The article is structured into eight sections, each addressing distinct aspects of this analysis. Following this introduction, Section 2 provides a theoretical framework, exploring the role of geographical disparities in educational inequality and grounding the discussion in existing literature. After a brief description of the Italian educational system, Section 3 outlines geographical distinctions within Italy, focusing on the North–South divide and the classification of areas as either central or marginal. Section 4 details the research strategy, while Sections 5 and 6 describe the methodology. Section 7 presents the results, and Section 8 concludes with a summary and discussion of the key findings.

2. The Geographical Dimension of Educational Inequality

Research on educational stratification has predominantly focused on the national level, often comparing different countries. This focus is justified, as educational systems are key components of the modern nation-state (Meyer, 1977), with the standardisation of schooling across a state's territory and population being a primary objective of contemporary education systems (van de Werfhorst & Mijs, 2010). However, examining variations within a country, particularly regarding the expansion of education and the associated inequalities, can provide important theoretical insights. For example, it is crucial to determine whether the goal of educational equalisation (Breen & Jonsson, 2007) is achieved evenly across the country or whether local social and economic heterogeneity significantly influences its realisation (Morris, 2023).

In a meritocratic society, schools are ideally expected to select individuals based on inclusive, non-discriminatory principles, meaning that academic success should not be influenced by ascriptive factors such as geographical origin (Bukodi & Goldthorpe, 2011; Goldthorpe, 2003). In reality, however, geography remains a crucial determinant of educational opportunities, shaping key institutional settings such as school availability and local labour market conditions. Where one is born or resides can influence educational opportunities and inequalities in multiple ways. First, the socio-economic composition of students across regions must be considered, as it shapes the socio-economic composition of classrooms and peer groups, as well as the immediate environment in which students interact daily (Wells et al., 2023; Willms, 2010). This composition is often influenced by the uneven development of occupational structures across regions, with highly skilled service-sector jobs typically concentrated in large cities (Avola et al., 2024; Oesch, 2013). As a result, highly educated individuals are more likely to relocate to areas with better employment prospects, which are frequently large urban centres (Panichella & Cantalini, 2023; Panichella & Impicciatore, 2024). Consequently, educational expansion and geographical mobility can deepen disparities between regions,

concentrating highly skilled individuals in specific areas (Scandurra et al., 2020). Moreover, geographical mobility linked to these inequalities leads to significant depopulation in certain areas (Rees et al., 2017), which in turn affects class sizes and the teacher-to-student ratio. Notably, depopulation processes can paradoxically have a protective effect on certain categories of students, particularly the most vulnerable. With smaller class sizes, these students may benefit from a lower teacher-to-student ratio, allowing for more individualised attention and support (Blatchford et al., 2003). Furthermore, in less populated areas, students are often in a more socially controlled environment, which can reduce instances of social deviance and create a setting that supports academic focus and personal development.

Beyond social composition, geography also influences educational opportunities through its effect on the quality of educational provision. Wealthier neighbourhoods or large cities generally provide better access to high-quality institutions, including primary and secondary schools, as well as higher education and vocational training centres (Cordes et al., 2016; Johnson, 2012). Conversely, socio-economically deprived areas often suffer from a scarcity of institutions, both in terms of quantity and quality, which negatively affects student outcomes. Furthermore, students in affluent areas typically benefit from better-funded schools, advanced educational resources, and a range of extracurricular activities, all of which enrich their academic experience (Burdick-Will & Logan, 2017; Gerber, 1996). In contrast, students in disadvantaged areas may face significant challenges, such as overcrowded classrooms, limited access to technology, and fewer educational resources, which can impede their academic progress (Lucatelli, 2015). Nonetheless, recent studies in the US suggest that while residing in geographically disadvantaged contexts negatively affects academic achievement, this is not necessarily due to lower school quality in these areas (Wodtke et al., 2023).

Additionally, the availability of employment opportunities in different areas influences educational choices, particularly in terms of students' selection of schools and educational tracks. A strong demand for skilled labour in both tertiary and industrial sectors may encourage students to enrol in technical and professional pathways aligned with local economic needs, in order to improve their employment chances. In contrast, in areas with less developed occupational structures, or where rural work predominates, general education is often favoured (Panichella, 2014). The higher concentration of technical and professional schools in economically advantaged areas is frequently supported by collaborations between schools, businesses, and professionals, facilitating internships and job placements—opportunities that are typically less accessible in marginalised regions.

3. Educational Inequality and Geographical Cleavages in Italy

3.1. The Italian Educational System and the Transition From Lower to Upper Secondary School

Before discussing how geographical disparities intersect with educational opportunities and inequalities, it is helpful to briefly outline the structure of the Italian educational system, focusing on the transition from lower secondary to upper secondary education. This is a critical educational transition where major inequalities emerge, both in terms of enrolment and access to more prestigious tracks (Panichella & Triventi, 2014), making it the primary focus of this study. In Italy, after completing lower secondary school at age 14, students face a decisive choice regarding upper secondary education, which typically spans ages 15 through 18–19. They can select from four main educational tracks, each lasting four or five years: academic (*liceo*), humanistic, technical, and vocational.

Unlike in some other systems where teachers recommend a suitable track based on academic performance, in Italy, students and their families independently select their educational path, allowing enrolment in any track regardless of prior academic achievement (Checchi & Flabbi, 2007; Contini & Scagni, 2011). As a result, this decision is strongly influenced by students' social background and individual characteristics (Panichella, 2022; Panichella & Triventi, 2014).

The academic track, or *liceo*, is generally considered the most prestigious, with options such as the classical lyceum—focused on humanities subjects such as Latin, Greek, and philosophy—and the scientific lyceum, which emphasises mathematics and sciences. Students from more advantaged backgrounds tend to favour these tracks (Panichella & Triventi, 2014). The technical and humanistic tracks occupy an intermediate position, offering a blend of practical and theoretical education to prepare students for either university or the labour market (Ballarino & Panichella, 2016; Contini & Scagni, 2013).

The vocational track, by contrast, is primarily designed for direct entry into the labour market and is frequently chosen by students with lower academic performance, often from disadvantaged backgrounds (Azzolini & Barone, 2013). Within this track, there are also shorter two- to three-year vocational pathways that allow for early workforce entry but do not grant university access, further limiting educational and professional opportunities and reinforcing the stratifying effects of track choice.

3.2. Education, the North–South Divide, and the Distinction Between Marginal and Central Areas

Geographical disparities have profoundly shaped educational opportunities in Italy, a country marked by some of the highest levels of territorial inequality in Western societies (Felice, 2013). Traditionally, these inequalities have been examined through the lens of the North–South divide (Panichella, 2022). Despite improvements in general well-being and a broader distribution of educational institutions, the *Mezzogiorno* (Southern Italy) continues to lag behind, characterised by lower educational attainment and more pronounced educational inequality, particularly evident in the transition from lower to upper secondary school (Ballarino et al., 2014).

Following lower secondary school, educational choices in the South are characterised by a de facto strong dichotomy between enrolling in academic high schools, which typically leads to university, or exiting the education system entirely (Panichella, 2014). This rigid structure of choice is linked to the historically lower rates of enrolment in technical and vocational schools, a long-standing issue tied to weak industrial development and a low demand for intermediate-skilled labour in the Southern labour market (Trigilia, 1992). Limited access to technical and vocational schools, combined with lower student achievement and higher dropout rates, creates a particularly challenging environment for disadvantaged students in Southern regions (Ballarino & Panichella, 2021; Bratti et al., 2007).

While the North–South divide is a well-documented source of educational inequality, other dimensions of geographical disparity within each macro-region have received less attention. In other words, beyond the North–South divide, educational inequality also aligns with other geographical cleavages that remain largely underexplored in sociological research on education. One significant cleavage is between central and marginal (or peripheral) areas, a broad distinction commonly employed in both Italian and international debates (Carrosio & Osti, 2017; Copus, 2001; Kühn, 2015; Viesti, 2021). Central areas attract skilled labour, offer greater employment opportunities, and support "inclusive institutions" (Acemoglu & Robinson, 2012)

that foster broad economic participation (Fielding, 1992; Moretti, 2004). In contrast, marginal areas suffer from depopulation, limited economic opportunities, and declining social services, leading some researchers to label them "places that don't matter" (Rodríguez-Pose, 2018) or "left behind" (Pike et al., 2023).

This central-marginal divide reflects recent shifts in geographical inequality, largely driven by globalisation and technological advancement (Chetty et al., 2014; Moretti, 2012), and differs from historical divides such as urban-rural disparities or the North–South cleavage in Italy. Unlike industrialisation, which geographically favoured certain regions—most notably the North-West—this newer form of marginalisation arises from population decline, demographic ageing, dwindling job prospects, low capital investment, and limited public services (Barca et al., 2014). From an educational perspective, marginal areas face disadvantages in both the quality of schooling and the availability of school services, including upper secondary education, extracurricular programmes, and childcare facilities (Lucatelli, 2015; Pietrolucci et al., 2024). Additionally, secondary school teachers in Italy exhibit high mobility rates and frequently seek transfers when assigned to schools in disadvantaged areas and smaller towns (Barbieri et al., 2011; Lezzi, 2018).

The central-marginal continuum thus highlights that individuals in peripheral areas may face systemic disadvantages, including access to valuable educational opportunities. This study seeks to investigate how these forms of geographical marginality contribute to educational inequality in Italy, an objective further elaborated on in the following section on research strategy.

4. Research Strategy

The study systematically compares results from two data sources, using geographical residence as the independent variable, defined according to the National Strategy for Inner Areas (SNAI) classification (see Section 5.3). This classification emphasises spatial peripherality in relation to access to essential services and its association with demographic and socio-economic vulnerability. Moving beyond the traditional urban-rural dichotomy, it aligns with recent international literature advocating for more granular spatial measures (Detemple & Wicht, 2024).

To capture geographical marginality, we employ two different approaches based on the level of detail available in the data (see Section 5.1). On the one hand, municipal-level data allow us to differentiate between central and marginal municipalities with varying degrees of peripherality. On the other hand, provincial-level data define marginality as the proportion of individuals residing in socio-economically disadvantaged municipalities within a province. This dual definition, which provides complementary perspectives on how geographical marginality influences educational outcomes, carries significant implications for how geographical residence is conceptualised. Geographical residence can be measured either based on the characteristics of the specific municipality of residence or understood more broadly as the general characteristics of the surrounding context beyond the municipality itself. This distinction is crucial, as a student may live in a municipality with characteristics of social and economic marginality, yet that municipality could be situated near other centres with better access to services and resources.

This study examines patterns of geographical marginality and centrality in relation to students' educational choices after lower secondary school in Italy, with a particular attention to the North–South divide. Rather than testing the mechanisms underlying this association, we take an initial step in describing how geographical marginality—and its interaction with the North–South divide—relates to educational opportunities.

Specifically, we analyse four educational outcomes: (a) enrolment in a 4–5 year upper secondary school programme; (b) enrolment in a 2–3 year vocational programme; (c) non-enrolment in any upper secondary education, including dropouts and students retained in lower secondary school due to grade repetition; and (d) enrolment in academic tracks. This approach provides a comprehensive perspective on the transition from lower to upper secondary education, a critical stage in the Italian educational system due to its lasting impact on subsequent educational and occupational inequalities and (re)production of social stratification. These outcomes encompass a range of scenarios, from pathways of particular advantage and prestige (e.g., selection of an academic track) to those marked by disadvantage and vulnerability (e.g., dropouts and repeated grades). Furthermore, while enrolment in a 4–5 year upper secondary education programme is the most common pathway for Italian youth (86.3% of the population aged 15–17, as per the Italian Labour Force Survey [IT-LFS]), both non-enrolment and track selection are socially stratified (Triventi, 2014). This study seeks to determine whether geographical factors—namely, geographical marginality and its interaction with the North–South divide—also play a significant role in influencing these educational choices.

We employ a three-step research strategy to address key research objectives, such as analysing differences in educational outcomes between marginal and central areas, examining geographical disparities beyond the North–South dimension, and observing how these two axes of inequality intersect. The first step explores differences in educational decisions between students in marginal versus central areas after completing lower secondary school, with attention to variations in access to higher-status tracks. The second step includes regional controls to assess whether geographical marginality exhibits distinct patterns nationwide or if broader macro-regional inequalities play a role. The third step examines intersections between geographical marginality and the North–South divide in shaping educational outcomes. This approach allows for a closer examination of variations in the association between geographical marginality and educational opportunities across different macro-regions, providing a nuanced view of how multiple geographical factors are associated with educational trajectories.

5. Data and Variables

5.1. Data

This study leverages two primary datasets: the IT-LFS and INVALSI, the National Institute for the Evaluation of the Italian School System. These datasets provide distinct yet complementary information that enables a comprehensive analysis of educational pathways and geographical marginality across Italy. The IT-LFS, conducted by the Italian Institute of Statistics (ISTAT), is a nationally representative household survey collecting data on all household members aged 15 and older. Our analysis draws on data from the years 2005 to 2014, focusing on a sample of 184,452 individuals aged 15 to 17. The large sample size, combined with detailed information on both enrolled and non-enrolled individuals in upper secondary education, allows for a comprehensive assessment of upper secondary school enrolment, dropout rates, and track placement, with rich detail on both educational and social background indicators. The survey includes 50 distinct categories for upper secondary tracks, offering nuanced insights into track placement.

However, IT-LFS data are limited to the provincial level and lacks municipality-specific information. As a result, we assess marginality at a broader scale, defining it as the percentage of individuals within each province residing in socioeconomically disadvantaged municipalities (see Section 5.3). This provincial-level

measure enables an analysis of how regional marginalisation correlates with enrolment, dropout rates, and track selection.

The INVALSI dataset originates from annual surveys conducted by INVALSI, covering the entire student population in Italy to monitor achievement in Italian reading (reading comprehension and grammatical knowledge) and mathematics. Our data is derived from assessments conducted in 2017–2018 and 2018–2019, capturing information on 504,123 students in grade 10, typically aged 15–17. Unlike the IT-LFS, INVALSI data is collected at the municipal level, offering finer spatial granularity for measuring territorial marginality. However, as it focuses solely on students, it does not allow for the study of upper secondary enrolment or dropout rates. Additionally, it provides less detail on track categories and social origin indicators. Despite these limitations, its high-resolution geographical data is particularly valuable for identifying marginal and central areas with precision.

5.2. Educational Outcomes

The analysis examines two groups of educational outcomes, which serve as the dependent variables in this study. The first group pertains to enrolment decisions following the completion of lower secondary education, measured using IT-LFS data. The primary outcome is the probability of enrolling in a 4–5 year upper secondary school programme, measured with a dummy variable coded as 1 for those enrolled in this programme and 0 for all others (including those enrolled in 2–3 year vocational programmes, those attending lower secondary school due to grade retention, and those not enrolled in any programme). This pathway is generally associated with academic and technical tracks, which prepare students for university or advanced career opportunities, as well as a lengthy vocational track leading directly into the labour market. In addition to this primary outcome, we assess an alternative enrolment choice, i.e., the likelihood of opting for shorter vocational programmes that span two to three years. This is measured with a dummy variable coded as 1 for those enrolled in these programmes and 0 for all others. These shorter programmes, typically organised at the regional level, facilitate earlier entry into the labour market but do not confer university eligibility. Lastly, we examine the probability of non-enrolment in any upper secondary education programme, representing the choice to exit the educational system after completing lower secondary school. This outcome is measured with a dummy variable coded as 1 for those attending lower secondary school due to grade retention or those not enrolled in any programme, and 0 for all others. As a robustness check, we also examine these two latter outcomes by excluding individuals enrolled in a 4–5 year upper secondary programme, thus estimating the probability of enrolling in a short vocational programme rather than not enrolling in upper secondary education. The results from this additional analysis confirm the pattern presented in the main text (see Supplementary File, Table A12).

The second group of outcomes focuses on track choice within upper secondary education and is measured using both the IT-LFS and INVALSI datasets. The detailed information on the track available in the IT-LFS allows us to examine enrolment in academic tracks, specifically the classical and scientific lyceums, which are generally regarded as the most prestigious pathways. In contrast, the INVALSI data combine classical and scientific lyceums with the linguistic lyceum (typically classified under the humanities track), requiring us to analyse the probability of students enrolling in either the academic tracks or the linguistic lyceum in this dataset. These probabilities are measured among students who have already opted to continue in upper secondary education, meaning they are conditional on enrolment. Therefore, we use a dummy variable coded

as 1 for those enrolled in academic tracks (or the linguistic lyceum, in the case of INVALSI) and 0 for those enrolled in humanities, technical, or vocational 4–5 year schools.

5.3. Geographical Marginality

The distinction between central and marginal areas is based on the classification provided by SNAI. SNAI is a place-based policy designed to address Italy's persistent geographical inequalities. This framework identifies central and marginal areas based on access to essential public services, specifically education, healthcare, and transportation. A municipality is classified as a central area (or city-hub) if it meets the following criteria (UVAL, 2014): (a) it has at least one academic and one vocational upper secondary school; (b) it contains a hospital with a catchment area of 150,000 to 300,000 inhabitants; and (c) it features a railway station with an average daily passenger count exceeding 2,500, providing short, medium, and long-distance transport services. Municipalities within a 20-minute road travel time from a city-hub are also classified as central or "belt" areas. In contrast, marginal areas are municipalities located more than 20 minutes away from a city-hub. These are further categorised into three subtypes based on distance: intermediate (20–40 minutes), peripheral (40–75 minutes), and ultra-peripheral (75 minutes or more).

Since areas are classified as central based, among other factors, on the presence of academic and vocational upper secondary schools, it follows that these schools are predominantly concentrated in central areas rather than in marginal ones (Pietrolucci et al., 2024). As a result, students residing in marginal areas, as defined by SNAI, may experience lower enrolment rates in upper secondary education due to the limited availability of schools in their vicinity. In other words, the reduced concentration of upper secondary schools in marginal areas may hinder educational opportunities for residents. This issue can be particularly pronounced in marginal areas of the South, which are more isolated and where public transport infrastructure is less developed, complicating school mobility towards central areas.

To quantify geographical marginality, we use both municipal-level and provincial-level measures. At the provincial level, two indicators were constructed using data from the IT-LFS. The first indicator represents the percentage of the population living in marginal municipalities within each province, providing an overview of provincial marginality by illustrating the proportion of residents in socioeconomically disadvantaged areas. The second indicator, used as a robustness check, measures the percentage of municipalities within each province classified as marginal, reflecting the geographical spread of marginality across the provincial landscape. For analytical purposes, we chose to present the results in terms of tertiles of marginality; however, the findings remain robust when using continuous measures as well (see Supplementary File, Table A10). This approach aligns with previous research (Avola et al., 2024; Panichella et al., 2024), which underscores the importance of distinguishing between areas with varying degrees of marginality, as particularly high levels of marginality may have distinct implications for educational outcomes. In contrast, the INVALSI data measure marginality at the municipal level, identifying the specific type of municipality in which each student's school is located at the time of data collection—whether central, intermediate, peripheral, or ultra-peripheral. To summarize, in the IT-LFS dataset, we utilise a variable divided into three categories, corresponding to tertiles of the distribution of our indicator: first tertile (reference category, corresponding to a low degree of marginality), second tertile (medium degree of marginality), and third tertile (high degree of marginality). For the INVALSI dataset, we employ a variable with five categories: city-hub (reference category), inter-municipal hub, belt, intermediate, and peripheral/ultra-peripheral.

Figure 1 illustrates the distribution of central and marginal areas in Italy, with the SNAI classification at the municipal level shown in the left panel and our provincial-level measure of marginality in the right panel. In both cases, redder colours indicate more central areas, while greener colours signify more marginal areas. The left panel, based on the SNAI classification, highlights a high concentration of marginal municipalities in rural and mountainous areas, particularly in Southern Italy and parts of the Centre. The right panel, which presents provincial-level marginality based on the population distribution within marginal municipalities, aligns closely with the SNAI classification at the municipal level (see also Supplementary File, Table A1).

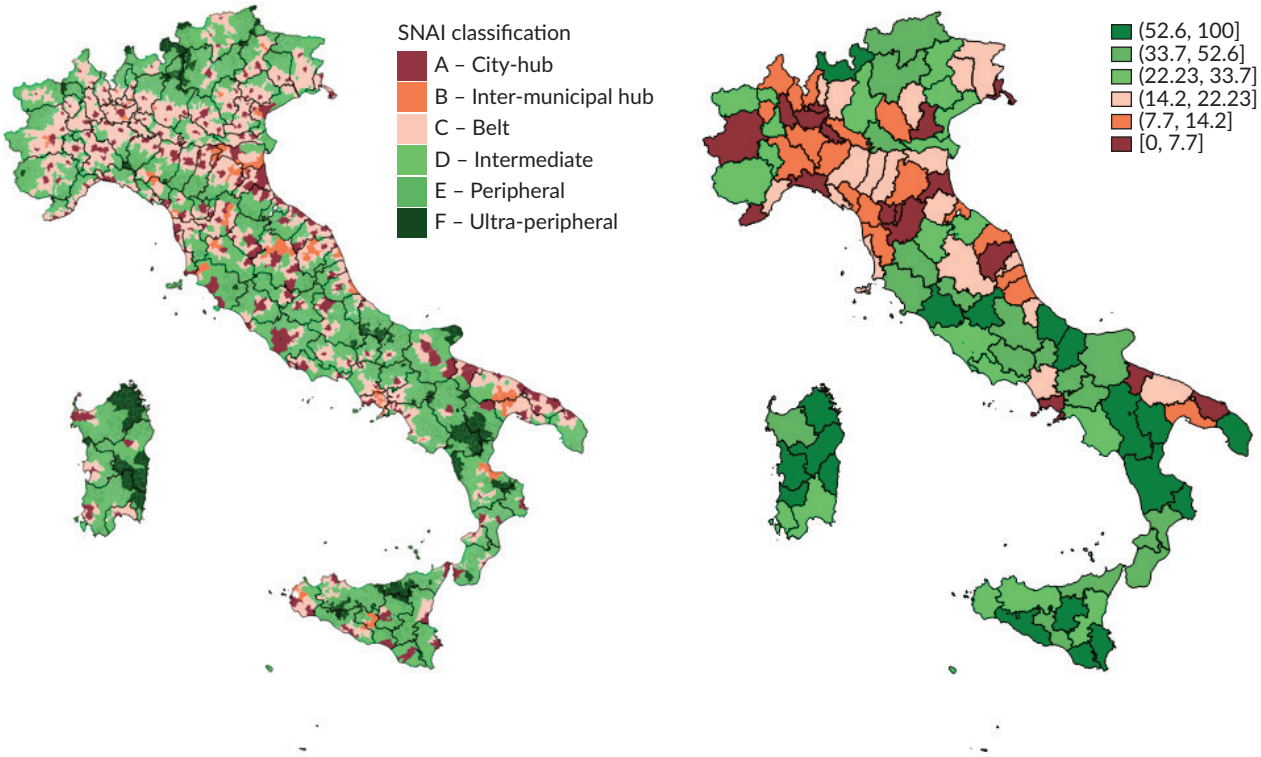

Figure 1. Marginal and central areas in Italy, according to the municipal-level (left panel) and provincial-level (right panel) measures of geographical marginality. Source: own elaboration based on INVALSI (2017–2018; 2018–2019) and IT-LFS data (2005–2014).

Both classifications reveal a pronounced North–South imbalance in Italy, with geographical marginality concentrated predominantly in the South. For example, in the North-West, only one-third of municipalities are classified as marginal, with just one-tenth of the population residing in these areas. The South, however, presents a starkly different scenario, where two-thirds of municipalities are considered marginal, and approximately one-third of the population lives in these disadvantaged regions. The North-East and Centre regions represent intermediate cases, with a more balanced distribution of central and marginal areas compared to the extremes observed in the North-West and South.

5.4. Controls

In the analysis, we include a set of control variables to account for individual and family characteristics that may influence educational outcomes beyond geographical marginality. Firstly, the macro-area of residence (North-West, North-East, Centre, South, and Islands) is included to control for the different distribution of

marginal and central areas across macro-regions and to estimate the association between geographical marginality and educational outcomes over and above the North–South divide. Moreover, the models include two indicators of social origin, both measured as the highest value held by either parent (dominance principle; Erikson, 1984). The first is parental education, which in the INVALSI dataset distinguishes between parents with lower secondary education or less, upper secondary education, and tertiary education. In the IT-LFS dataset, more detailed information is available, allowing for the differentiation of parents with the following educational qualifications: no formal qualification, primary education, lower secondary education, upper secondary education (two to three years), upper secondary education (four to five years), post-secondary non-tertiary education, and tertiary education. The second indicator is parental social class, which is operationalised using a simplified version of the EGP scheme, including the following categories: service class (EGP I+II), white collars (III), petit bourgeoisie (IV), working class (V+VI+VII), and unemployed or inactive. The models also control for sex, a dummy for country of birth (Italy vs abroad), age, and year of survey dummies. Descriptive statistics for all variables are presented in the Supplementary File, Tables A2–A3.

6. Statistical Analysis and Model Specification

The analysis employs linear probability models (LPMs) to estimate the effects of geographical marginality on educational outcomes, with robust standard errors applied to address potential heteroscedasticity. The LPM approach offers a straightforward interpretation of the probability of different educational choices across varying levels of marginality. As a robustness check, we also estimate logit models and multilevel models, which substantially confirm the results presented in the main text (see Supplementary File, Tables A8–A9). The models are structured to sequentially assess the net effect of marginality, the role of the macro-region of residence, and the interactions between marginality and Italy's North–South divide.

The model specification follows the steps of the empirical strategy outlined earlier. The first step quantifies the direct effect of marginality on educational outcomes by estimating two models:

$$\text{M1: } Y_i = \alpha + \beta_1 \text{Marg}_i + \beta_2 Z_i + \varepsilon_i$$

$$\text{M2: } Y_i = \alpha + \beta_1 \text{Marg}_i + \beta_2 Z_i + \beta_3 (\text{Par\_ edu}_i \times \text{Class}_i) + \varepsilon_i$$

where Y_i represents the probability of a particular educational outcome for individual i, β_1 is the coefficient estimating the effect of geographical marginality (Marg_i) on the outcome; Z_i represents the set of control variables, sex, immigrant status, age, and survey year; and ε_i denotes the error term. In the second model (M2), an interaction term between parental education and social class is included to examine the combined effect of these factors on the educational outcome. This interaction, facilitated by the large sample size, allows for a nuanced analysis of the relationship between geographical marginality and educational choices while controlling for various combinations of parental education and social class. This control is critical, as the penalising effect of geographical marginality may be influenced by the sorting effect across different contexts. Geographical mobility further accentuates this sorting by concentrating highly qualified individuals in specific urban areas (typically large cities) (Panichella & Cantalini, 2023), increasing the socio-spatial distance from marginal areas. In other words, this approach allows for the control of the socio-economic composition of different geographical areas, particularly the lower proportion of highly educated and skilled individuals in marginal regions, which can negatively influence the educational outcomes of young people (see Section 2). While alternative strategies could address these socio-economic

disparities—such as including macro-level controls for the proportion of tertiary-educated individuals or average income—our approach can be considered among the most effective when working with individual-level data.

The second step of the empirical analysis examines whether marginality is associated with educational outcomes independently of Italy's broader North–South divide, by means of the following model:

$$\text{M3: } Y_i = \alpha + \beta_1 \text{Marg}_i + \beta_2 Z_i + \beta_3(\text{Par\_ edu}_i \times \text{Class}_i) + \beta_4(\text{Reg}_i) + \varepsilon_i$$

where Reg_i indicates the macro-region of residence, to assess whether the effect of marginality persists over and above Italy's traditional North–South divide. Including this regional variable helps account for the fact that many marginal areas are concentrated in the South, clarifying whether geographical marginality independently impacts educational opportunities or if its effect primarily reflects its concentration in Southern regions.

The third step of the analysis assesses whether the association between marginality and educational outcomes varies across macro-regions, specifically within Italy's North–South divide. In this case, we estimate M3 separately for Northern, Central, and Southern regions, allowing for an exploration of whether the effects of marginality on educational outcomes differ by macro-area. This model provides insight into whether the association between marginality and educational trajectories is amplified or mitigated within specific macro-regions, offering a nuanced perspective on how regional contexts shape the consequences of geographical marginality on educational pathways. As a robustness check, we estimate an additional model including an interaction term between geographical marginality and the North–South divide. The findings align with those from models stratified by macro-region, as presented in the main text (see Supplementary File, Tables A10–A11).

7. Results

7.1. Enrolment in 4–5-Year Upper Secondary Schools

This section examines the association between geographical marginality and the probability of enrolment in a 4–5-year upper secondary school, using data from the IT-LFS. Table 1 presents the beta coefficients estimated through LPMs, analysing how different levels of geographical marginality—represented by the second and third tertiles compared to the first tertile (reference category)—affect the likelihood of enrolment.

The results from M1, which estimates the gross association between marginality and enrolment in a 4–5-year upper secondary school, indicate that the probability of enrolment for individuals residing in marginal areas does not substantially differ from that of individuals in less marginal contexts ($\beta_{2\text{ndtertile}} = 0.00$; $\beta_{3\text{rdtertile}} = 0.01$). This association becomes slightly more pronounced in M2, where an interaction term between parental education and social class is introduced to account for the combined effect of family background on educational outcomes. Net of sociodemographic and family background characteristics, students in provinces with a high degree of marginality exhibit a 2-percentage-point higher probability of enrolling in 4–5-year upper secondary schools.

In Model 3, the analysis incorporates the North–South divide by introducing a regional variable that categorises regions as North-West, North-East, Centre, or South. With the addition of regional controls, the

Table 1. Geographical marginality and probability of being enrolled in 4–5-year upper secondary schools, by macro-region.

	M1	M2	M3	North	Centre	South
Geographical marginality (ref. 1st tertile)						
2nd tertile	0.00	0.01***	0.00	0.01**	−0.01*	0.01***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
3rd tertile	0.01***	0.02***	0.00	−0.06***	−0.00	0.04***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
N	184,452	184,452	184,452	76,210	26,930	81,312

Notes: LPMs; Beta coefficients and robust standard errors in parentheses; M1 controls for sex, immigrant status, age, year of survey; M2 includes also parental education and occupation; M3 includes also geographical macro-area of residence; models by macro-region are estimated with full controls; *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$. Source: Own elaboration based on IT-LFS data (2005–2014).

coefficients for marginality in both tertiles become statistically insignificant, implying that the (small) effect of marginality observed in the previous model is primarily driven by broader regional disparities rather than by marginality alone.

The intersection between geographical marginality and macro-region, presented in the second part of Table 1, offers further insight into these dynamics (see also Supplementary File, Figure A1). In the North, the coefficient for the second tertile is slightly positive but not substantially significant ($\beta_{2ndtertile} = 0.01$), while the coefficient for the third tertile is largely negative ($\beta_{3rdtertile} = -0.06$), indicating a much lower probability for young individuals living in marginal areas in the North to enrol in 4–5-year upper secondary schools compared to their counterparts living in Northern central areas. In the Centre, the effect of marginality is non-significant ($\beta_{2ndtertile} = -0.01$; $\beta_{3rdtertile} = -0.00$), suggesting that marginality does not play a substantial role in shaping enrolment in this region. In contrast, the South exhibits a distinct pattern, with a positive association in both the second ($\beta_{2ndtertile} = 0.01$) and, more notably, third tertile ($\beta_{3rdtertile} = 0.04$). This indicates that, particularly for individuals in the third tertile, marginality is associated with an increased likelihood of enrolment.

Therefore, analyses disaggregated by geographical macro-area indicate that the relationship between geographical marginality and the likelihood of enrolling in a 4–5-year upper secondary school programme varies across regions. In the North, individuals residing in provinces with the highest levels of marginality face a disadvantage in terms of upper secondary school enrolment. Conversely, in the South, individuals from similarly marginal areas appear to experience an advantage. In the following section, we delve deeper into this North–South disparity, focusing specifically on individuals who do not enrol in a 4–5 year upper secondary school programme.

7.2. The Risk of Non-Enrolment and Enrolment in 3-Year Vocational Schools

Table 2 explores regional differences in educational choices by examining two distinct outcomes that complement the choice of enrolling in 4–5-year upper secondary schools: the probability of enrolment in 3-year vocational schools and the risk of not being enrolled in any upper secondary education. The results, based solely on IT-LFS data, are reported separately for the North, Centre, and South, with tertiles of marginality representing varying degrees of geographical disadvantage.

Table 2. Geographical marginality, probability of being enrolled in 2–3-year vocational schools, and probability of not being enrolled in any upper secondary education programme, by macro-region.

	Enrolment in 2–3-year vocational schools		
	North	Centre	South
Geographical marginality (ref. 1st tertile)			
2nd tertile	–0.01***	0.01***	0.00**
	(0.00)	(0.00)	(0.00)
3rd tertile	0.04***	0.00	–0.00
	(0.01)	(0.00)	(0.00)
N	76,210	26,390	81,312
	Non-enrolment		
	North	Centre	South
Geographical marginality (ref. 1st tertile)			
2nd tertile	0.00	–0.00	–0.02***
	(0.00)	(0.00)	(0.00)
3rd tertile	0.01***	0.00	–0.04***
	(0.01)	(0.00)	(0.00)
N	76,210	26,390	81,312

Notes: LPMs; Beta coefficients and robust standard errors in parentheses; models control for sex, immigrant status, age, year of survey, parental education, and parental occupation; *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$. Source: Own elaboration based on IT-LFS data (2005–2014).

The first panel of the table shows that in northern regions, the coefficient for the second tertile of marginality is slightly negative ($\beta_{2ndtertile} = -0.01$), whereas that of the third tertile is positive ($\beta_{3rdtertile} = 0.04$). This pattern may indicate that in Northern regions, geographical marginality increases the likelihood of students being placed in vocational education rather than facing exclusion from upper secondary education entirely. This finding is further supported by the predicted probabilities (see Supplementary File, Figure A2) and models excluding students enrolled in 4–5-year upper secondary education programmes, which show that young people in marginal areas of the North are more likely to enrol in shorter vocational programmes rather than face dropout or grade retention compared to their counterparts in both northern central areas and southern marginal areas (see Supplementary File, Table A12).

In the Centre, the results show no substantial association between geographical marginality and the probability of enrolling in short vocational courses, suggesting that highly marginalised areas in the Centre do not experience the same vocational enrolment pressure observed in the North. In contrast, the South presents a different pattern compared to the North, also with regard to this educational outcome. Students in marginalised areas of the South do not exhibit the same increased likelihood of vocational enrolment as seen in northern regions.

To further understand this regional distinction, the second panel in Table 2 examines the risk of not being enrolled in any upper secondary school. For both the North and Centre, neither the second nor third tertiles show substantially significant coefficients, suggesting that geographical marginality does not significantly influence the risk of educational exclusion in these regions. In the South, the pattern shifts

considerably, with young individuals in the third tertile of marginality exhibiting a substantially lower risk of educational exclusion.

Overall, Table 2 highlights a key difference in how geographical marginality affects educational outcomes across regions. In the North, students residing in marginal areas are more often channelled into 3-year vocational schools, while in the South, students in marginal areas face a lower risk of experiencing school dropout or other situations of heightened educational disadvantage.

7.3. The Choice of the Academic Track

Table 3 explores how geographical marginality shapes students' likelihood of selecting an academic track in upper secondary education. It presents the results of M3, estimated using both the IT-LFS and INVALSI datasets. Geographical marginality is measured using two different approaches: One divides marginality into tertiles, while the other classifies municipalities as central, belt, intermediate, and peripheral or ultra-peripheral, as defined by the SNAI classification.

The IT-LFS data show limited differences in the probability of enrolling in academic tracks between students from areas with varying levels of marginality. Students in the second and third tertiles of marginality exhibit only a slight decrease in the likelihood of choosing an academic track, with coefficients of −0.01 and −0.03, respectively. Small differences are also observed in the INVALSI data, with coefficients ranging between −0.01 and 0.01.

Table 3. Geographical marginality and probability of being enrolled in the academic track.

	IT-LFS	INVALSI
Geographical marginality (ref. 1st tertile)		
2nd tertile	−0.01*** (0.00)	—
3rd tertile	−0.03*** (0.00)	—
Geographical marginality—SNAI (ref. city-hub)		
Inter-municipal hub	—	−0.01*** (0.00)
Belt	—	−0.01*** (0.01)
Intermediate	—	0.00 (0.00)
Peripheral and ultra-peripheral	—	0.01* (0.00)
N	159,258	504,123

Notes: LPMs; Beta coefficients and robust standard errors in parentheses; models control for sex, immigrant status, age, year of survey, parental education, and parental occupation; *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$. Source: Own elaboration based on IT-LFS data (2005–2014) and INVALSI data (2017–2018; 2018–2019).

As with previous analyses, however, models stratified by macro-regional location suggest that regional context plays a significant role in shaping the association between marginality and academic track enrolment (Table 4; see also Supplementary File, Figure A3). Both the IT-LFS and INVALSI data indicate that in Northern Italy, moderate and particularly high levels of marginality are associated with a considerable decrease in the likelihood of choosing academic tracks. Specifically, students in both the second and third tertiles of marginality exhibit significant negative coefficients ($\beta_{2ndtertile} = -0.04$; $\beta_{3rdtertile} = -0.08$), as do those in intermediate, peripheral, and ultraperipheral municipalities ($\beta_{intermediate} = -0.03$; $\beta_{peripheral} = -0.05$).

The Centre and South reveal different trends. In the Centre, it is particularly students from moderately marginalised areas (second tertile) who show a higher probability of choosing academic tracks ($\beta_{2ndtertile} = 0.04$). In the South, marginality does not appear to be significantly associated with academic track selection in the IT-LFS data. However, the INVALSI data provides a more nuanced perspective, showing a positive association with academic track enrolment for students in peripheral and ultra-peripheral areas only in Southern Italy ($\beta_{peripheral} = 0.03$).

In summary, these findings highlight how geographical marginality interacts with regional context to shape students' educational choices, revealing that the impact of marginality is not uniform across Italy. In the North, higher levels of marginality are closely linked to a reduced probability of choosing the academic track, reinforcing the challenges faced by students in more isolated areas. In contrast, Southern Italy exhibits a distinct pattern: Compared to students living in city-hubs or non-marginal areas, such as large cities, students in the marginal areas of the South are more likely to face the dual pressure of either not enrolling in

Table 4. Geographical marginality and probability of being enrolled in the academic track, by macro-region.

	IT-LFS			INVALSI		
	North	Centre	South	North	Centre	South
Geographical marginality (ref. 1st tertile)						
2nd tertile	−0.04*** (0.00)	0.04*** (0.01)	−0.01* (0.01)	–	–	–
3rd tertile	−0.08*** (0.00)	0.02*** (0.01)	−0.01 (0.01)	–	–	–
Geographical marginality—SNAI (ref. city-hub)						
Inter-municipal hub	–	–	–	−0.00 (0.00)	−0.03*** (0.01)	−0.01 (0.00)
Belt	–	–	–	−0.03*** (0.00)	−0.01* (0.01)	0.02*** (0.00)
Intermediate	–	–	–	−0.03*** (0.00)	0.01* (0.01)	0.01*** (0.00)
Peripheral and ultra-peripheral	–	–	–	−0.05*** (0.01)	0.01 (0.01)	0.03*** (0.00)
N	64,106	24,392	70,760	229,609	97,385	176,679

Notes: LPMs; Beta coefficients and robust standard errors in parentheses; models control for sex, immigrant status, age, year of survey, parental education, and parental occupation; *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$. Source: Own elaboration based on IT-LFS data (2005–2014) and INVALSI data (2017–2018; 2018–2019).

upper secondary school or, if they do enrol, choosing the academic track. In other words, the dichotomy between non-enrolment and academic track enrolment, characteristic of Southern regions (see Section 3.2), is amplified by geographical marginality, contributing to a complex educational landscape. Indeed, while students in marginal areas in the North are more likely to enter shorter vocational programmes compared to their peers in central areas of the North, those in the South, particularly from the most isolated communities, appear more inclined towards academic pathways if they remain in school.

8. Conclusion

This study investigates the relationship between geographical marginality and educational outcomes in Italy, focusing on how students from central and marginal areas in Northern and Southern regions differ in their enrolment decisions, dropout rates, and academic track selection in upper secondary education. The findings reveal that while the effects of geographical marginality are observable, they are generally modest compared to the more significant North–South divide. Specifically, the average effect of marginality on outcomes such as enrolment and track choice typically ranges from 1 to 3 percentage points in magnitude. The role of marginality becomes more pronounced when considered within the broader context of the North–South divide, accentuating the characteristics of regional dualism in educational choices (Ballarino et al., 2014; Panichella, 2014). In the North, marginal areas are associated with a lower likelihood of enrolling in 4–5 year upper secondary programmes. However, students in these areas exhibit a higher propensity for enrolment in 3-year vocational schools compared to their peers in central areas of the North. This suggests that the primary factor behind lower enrolment in the most typical five-year programmes in Northern marginal areas is the greater prevalence of vocational school enrolment, directing students toward shorter, less academically focused pathways.

In the South, the relationship between marginality and educational choices differs. Students in marginal areas of the South, when compared to their peers in central Southern areas, display higher rates of enrolment in 4–5-year upper secondary programmes and a lower risk of non-enrolment. Thus, unlike the Centre-North, marginality in the South seems to serve as a "protective" factor, reducing the risk of school dropout and other forms of educational disadvantage.

Regarding academic track enrolment, both the IT-LFS and INVALSI data indicate that, on average, students in marginal areas do not differ substantially from those in central areas. However, even when considering this educational outcome, the effect of marginality varies significantly by region, with a negative association in the North and a positive association in the South. In the North, students from marginal areas who remain in upper secondary school are less likely to enrol in academic tracks than their peers in central Northern areas. Conversely, in the South, students in marginal areas are more likely to enrol in academic tracks than those in central Southern areas.

This result contrasts with recent findings on labour market marginality and social mobility (Avola et al., 2024; Panichella et al., 2024), which highlight a clear double disadvantage in Southern marginal areas. When considering educational outcomes, however, marginality in the South seems to exert a protective effect, reducing dropout risk and increasing the likelihood of enrolling in academic schools. This protective effect may be attributed to various factors, such as smaller school classes, denser social capital, greater community social control, and lower levels of social deviance in marginal areas of the South.

However, while these factors may represent mechanisms of advantage for students living in Southern marginal areas, further clarification is needed. First, the reference category used in the analyses plays a role: While in the North, marginal areas are compared with economically and socially dynamic central areas like Milan or Turin, in the South, marginal areas are compared with central areas that have different socio-economic characteristics. Southern cities such as Naples, Bari, and Palermo tend to have limited modern educational infrastructure, fewer educational resources, and higher dropout rates. Therefore, rather than reflecting a protective effect of marginal areas, this result may partly be due to the comparison with particularly disadvantaged Southern urban areas, where high dropout rates and social deviance are more common.

Second, the protective effect may only appear to be protective. It could actually reflect the effects of the relatively unskilled occupational structure in Southern marginal areas, where the agricultural sector remains significant and commuting opportunities to more dynamic centres are limited. In these areas, the likelihood of securing employment that matches one's educational qualifications is generally lower (Panichella et al., 2024), which reduces the expected returns on technical and vocational education and can encourage families to view upper secondary and university education as more viable long-term strategies for social mobility. This perspective aligns with the observed dichotomy between non-enrolment and academic track enrolment in Southern regions—particularly in marginal areas—where technical and vocational education is less widespread than general and academic education, also due to historical and cultural factors (Felice, 2013). Moreover, the decision to enrol in university is often linked to plans to study at universities in the Centre-North region. Consequently, economically disadvantaged contexts, with a strong agricultural presence, may motivate students in Southern marginal areas to invest in education and pursue academic pathways with an eye toward university enrolment, which often involves geographical mobility toward the Centre-North, given limited transport access. From this perspective, the "protective" effect of marginality in the South on educational attainment may actually contribute to the issue of depopulation, reinforcing the brain drain toward more central and innovative areas in the Centre-North.

This study contributes to the ongoing debate on the relationship between geographical and educational inequalities, focusing on a context uniquely suited to examining these issues. Italy is characterized by unparalleled geographical disparities, marked by a pronounced North–South divide. All Southern regions lag economically behind their Northern counterparts, creating a stark regional imbalance. Moreover, marginalised areas are predominantly concentrated in the South, making these regions a context of "pure" marginality. In other words, Italy provides a unique opportunity to study the effects of marginality, as most marginal areas are not only geographically isolated but also situated in regions where even central areas face substantial economic deprivation. Future research should explore how the findings from Italy compare to those from other countries, where the effects of marginality may be obscured or offset by differing institutional or socioeconomic factors.

Building on this, however, our study yields findings that are, in part, counterintuitive. While existing literature suggests that disadvantaged contexts—in our case, marginal areas—tend to undermine educational opportunities through a network of interrelated socioeconomic and infrastructural factors (e.g., lower school quality, limited employment opportunities, and reduced human capital), our analysis reveals a potential "protective" effect associated with these contexts. This protective effect is particularly evident in contexts typically considered at high risk of disadvantage, such as Southern regions. In other words, the "pure" marginality described above may, in some cases, have positive implications for educational opportunities.

However, we cannot entirely dismiss the possibility that this protective effect may be misleading. Future research should delve into the mechanisms underlying this phenomenon to determine whether it conceals other forms of disadvantage.

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Conflict of Interests

The authors declare no conflict of interests.

Data Availability

Data from the IT-LFS are provided by the Italian National Institute of Statistics (ISTAT) and are available on its website. Data from INVALSI are provided by permission of INVALSI-SNV. Data will be made available on request to the corresponding author with the permission of INVALSI-SNV.

Supplementary Material

Supplementary material for this article is available online in the format provided by the authors (unedited).

References

Acemoglu, D., & Robinson, J. A. (2012). *Why nations fail: The origins of power, prosperity, and poverty*. Currency.

Associazione per lo sviluppo dell'industria nel Mezzogiorno. (2014). *Rapporto SVIMEZ 2014 sull'economia del Mezzogiorno*. Il Mulino.

Avola, M. (2017). Il dualismo Nord-Sud. In F. Barbera & I. Pais (Eds.), *Fondamenti di sociologia economica* (pp. 317–334). EGEA.

Avola, M., Piccitto, G., Cantalini, S., & Panichella, N. (2024). Occupational change and geographical inequality: A comparison between "central" and "marginal" areas in Italy. *Stato e Mercato*, *44*(2), 225–256. https://doi.org/10.1425/114660

Azzolini, D., & Barone, C. (2013). Do they progress or do they lag behind? Educational attainment of immigrants' children in Italy: The role played by generational status, country of origin, and social class. *Research in Social Stratification and Mobility*, *31*, 82–96. https://doi.org/10.1016/j.rssm.2012.11.002

Ballarino, G., & Panichella, N. (2016). Social stratification, secondary school tracking, and university enrolment in Italy. *Contemporary Social Science*, *11*(2/3), 169–182. https://doi.org/10.1080/21582041.2016.1186823

Ballarino, G., & Panichella, N. (2021). *Sociologia dell'istruzione*. Il Mulino.

Ballarino, G., Panichella, N., & Triventi, M. (2014). School expansion and uneven modernization: Comparing educational inequality in Northern and Southern Italy. *Research in Social Stratification and Mobility*, *36*, 69–86. https://doi.org/10.1016/j.rssm.2014.01.002

Barbieri, G., Rossetti, C., & Sestito, P. (2011). The determinants of teacher mobility: Evidence using Italian teachers' transfer applications. *Economics of Education Review*, *30*(6), 1430–1444. https://doi.org/10.1016/j.econedurev.2011.07.010

Barca, F., Casavola, P., & Lucatelli, S. (2014). *Strategia nazionale per le aree interne: Definizione, obiettivi, strumenti e governance*. Ministero dello Sviluppo Economico.

Bell, B., Blundell, J., & Machin, S. (2023). Where is the land of hope and glory? The geography of intergenerational mobility in England and Wales. *The Scandinavian Journal of Economics*, *125*(1), 73–106. https://doi.org/10.1111/sjoe.12511

Blatchford, P., Bassett, P., Goldstein, H., & Martin, C. (2003). Are class size differences related to pupils' educational progress and classroom processes? Findings from the Institute of Education class size study of children aged 5–7 years. *British Educational Research Journal*, *29*(5), 709–730. https://doi.org/10.1080/0141192032000133668

Blau, P. M., & Duncan, O. D. (1967). *The American occupational structure*. Free Press.

Bratti, M., Checchi, D., & Filippin, A. (2007). Geographical differences in Italian students' mathematical competencies: Evidence from PISA 2003. *Giornale degli Economisti e Annali di Economia*, *66*(3), 299–333.

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*(6), 1775–1810. https://doi.org/10.1086/508790

Bukodi, E., & Goldthorpe, J. H. (2011). Class origins, education, and occupational attainment in Britain: Secular trends or cohort-specific effects? *European Societies*, *13*(3), 347–375. https://doi.org/10.1080/14616696.2011.568259

Burdick-Will, J., & Logan, J. R. (2017). Schools at the rural-urban boundary: Blurring the divide? *The ANNALS of the American Academy of Political and Social Science*, *672*(1), 185–201. https://doi.org/10.1177/0002716217707176

Carrosio, G., & Osti, G. (2017). Le aree marginali. In F. Barbera & I. Pais (Eds.), *Fondamenti di sociologia economica* (pp. 303–316). EGEA.

Cersosimo, D., & Nisticò, R. (2013). Un paese disuguale: Il divario civile in Italia. *Stato e Mercato*, *2*, 265–299. https://doi.org/10.1425/74215

Checchi, D., & Flabbi, L. (2007). *Intergenerational mobility and schooling decisions in Germany and Italy: The impact of secondary school tracks* (Discussion Paper No. 2876). IZA.

Chetty, R., Hendren, N., Kline, P., & Saez, E. (2014). Where is the land of opportunity? The geography of intergenerational mobility in the United States. *The Quarterly Journal of Economics*, *129*(4), 1553–1623. https://doi.org/10.1093/qje/qju022

Connor, D. S., & Storper, M. (2020). The changing geography of social mobility in the United States. *Proceedings of the National Academy of Sciences*, *117*(48), 30309–30317. https://doi.org/10.1073/pnas.2010222117

Contini, D., & Scagni, A. (2011). Inequality of opportunity in secondary school enrolment in Italy, Germany, and the Netherlands. *Quality & Quantity*, *45*, 441–464. https://doi.org/10.1007/s11135-009-9307-y

Contini, D., & Scagni, A. (2013). Social-origin inequalities in educational careers in Italy. In M. Jackson (Ed.), *Determined to succeed? Performance vs choice in educational attainment* (pp. 149–183). Stanford University Press.

Copus, A. K. (2001). From core-periphery to polycentric development: Concepts of spatial and aspatial peripherality. *European Planning Studies*, *9*(4), 539–552. https://doi.org/10.1080/713666491

Cordes, S. A., Schwartz, A. E., Stiefel, L., & Zabel, J. (2016). Is neighbourhood destiny? Exploring the link between neighbourhood mobility and student outcomes. *Urban Studies*, *53*(2), 400–417. https://doi.org/10.1177/0042098014563469

Detemple, J., & Wicht, A. (2024). Uncovering regional inequalities in digitalization: A multifaceted measurement for Germany. *Measurement Instruments for the Social Sciences*, *6*, Article 13387. https://doi.org/10.5964/miss.13387

Erikson, R. (1984). Social class of men, women and families. *Sociology*, *18*(4), 500–514. https://doi.org/10.1177/0038038584018004003

Felice, E. (2013). *Perché il Sud è rimasto indietro*. Il Mulino.

Fielding, A. J. (1992). Migration and social mobility: South East England as an escalator region. *Regional Studies*, *26*(1), 1–15. https://doi.org/10.1080/00343409212331346741

Gerber, S. B. (1996). Extracurricular activities and academic achievement. *Journal of Research & Development in Education*, *30*(1), 42–50.

Goldthorpe, J. (2003). The myth of education-based meritocracy. *New Economy*, *10*(4), 234–239. https://doi.org/10.1046/j.1468-0041.2003.00324.x

Henry, K. L., Knight, K. E., & Thornberry, T. P. (2012). School disengagement as a predictor of dropout, delinquency, and problem substance use during adolescence and early adulthood. *Journal of Youth and Adolescence*, *41*, 156–166. https://doi.org/10.1007/s10964-011-9665-3

Johnson, O., Jr. (2012). A systematic review of neighborhood and institutional relationships related to education. *Education and Urban Society*, *44*(4), 477–511. https://doi.org/10.1177/0013124510392779

Kühn, M. (2015). Peripheralization: Theoretical concepts explaining socio-spatial inequalities. *European Planning Studies*, *23*(2), 367–378. https://doi.org/10.1080/09654313.2013.862518

Lezzi, B. (2018). *Relazione annuale sulla strategia nazionale per le aree interne*. Comitato Interministeriale per la Programmazione Economica (CIPE).

Lucatelli, S. (2015). La strategia nazionale, il riconoscimento delle aree interne. *Territorio*, *2015*(74), 80–96.

Meyer, J. W. (1977). The effects of education as an institution. *American Journal of Sociology*, *83*(1), 55–77. https://doi.org/10.1086/226506

Moretti, E. (2004). Human capital externalities in cities. In J. V. Henderson & J. F. Thisse (Eds.), *Handbook of regional and urban economics* (Vol. 4, pp. 2243–2291). Elsevier. https://doi.org/10.1016/S0169-7218(04)07051-0

Moretti, E. (2012). *The new geography of jobs*. Houghton Mifflin Harcourt.

Morris, K. (2023). Where DESO disappears: Spatial inequality and social stratification at labour market entry. *European Sociological Review*, *39*(1), 85–103. https://doi.org/10.1093/esr/jcac027

Oesch, D. (2013). *Occupational change in Europe: How technology and education transform the job structure*. Oxford University Press.

Panichella, N. (2014). *Meridionali al Nord. Migrazioni interne e società italiana dal dopoguerra ad oggi*. Il Mulino.

Panichella, N. (2022). Diseguaglianze territoriali e stratificazione sociale. *Il Mulino*, *71*(4), 61–69. https://doi.org/10.1402/105274

Panichella, N., & Cantalini, S. (2023). Is geographical mobility beneficial? The impact of the South-to-North

internal migration on occupational achievement in Italy. *Population Research and Policy Review*, *42*(5), Article 78. https://doi.org/10.1007/s11113-023-09824-9

Panichella, N., Cantalini, S., Avola, M., & Piccitto, G. (2024). Disuguaglianze territoriali e ritorni dell'istruzione. Un'analisi del dualismo Nord-Sud e delle differenze tra aree centrali e marginali in Italia. *Rassegna Italiana di Sociologia*, *65*(3), 579–608. https://doi.org/10.1423/114627

Panichella, N., & Impicciatore, R. (2024). The selectivity of internal movers: An analysis of the relationship between education, social origin, and geographical mobility in Europe. *Population Studies*, *78*(3), 393–411. https://doi.org/10.1080/00324728.2024.2388555

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), 666–693. https://doi.org/10.1080/14616696.2014.939685

Pietrolucci, A., Triventi, M., Cantalini, S., & Panichella, N. (2024). *Moving to the opportunity land. How school-related geographical mobility affects student achievement trajectories*. SocArXiv. https://doi.org/10.31235/osf.io/tnfc4

Pike, A., Béal, V., Cauchi-Duval, N., Franklin, R., Kinossian, N., Lang, T., Leibert, T., MacKinnon, D., Rousseau, M., Royer, J., Servillo, L., Tomaney, J., & Velthuis, S. (2023). "Left behind places": A geographical etymology. *Regional Studies*, *58*, 1167–1179. https://doi.org/10.1080/00343404.2023.2167972

Rees, P., Bell, M., Kupiszewski, M., Kupiszewska, D., Ueffing, P., Bernard, A., Charles-Edwards, E., & Stillwell, J. (2017). The impact of internal migration on population redistribution: An international comparison. *Population, Space and Place*, *23*(6), Article 2036. https://doi.org/10.1002/psp.2036

Rodríguez-Pose, A. (2018). The revenge of the places that don't matter (and what to do about it). *Cambridge Journal of Regions, Economy, and Society*, *11*(1), 189–209. https://doi.org/10.1093/cjres/rsx024

Rønningstad, C. (2025). The importance of belonging: Interactions between individual and structural risk factors for youth-disengagement. *International Journal of Social Welfare*, *34*(2), Article 12702. https://doi.org/10.1111/ijsw.12702

Scandurra, R., Cefalo, R., & Kazepov, Y. (2020). School-to-work outcomes during the Great Recession: Is the regional scale relevant for young people's life chances? *Journal of Youth Studies*, *24*(4), 441–465. https://doi.org/10.1080/13676261.2020.1742299

Sorokin, P. (1927). *La mobilità sociale*. Edizioni di Comunità.

Trigilia, C. (1992). *Sviluppo senza autonomia*. Il Mulino.

Triventi, M. (2014). Le disuguaglianze di istruzione secondo l'origine sociale. Una rassegna della letteratura sul caso italiano. *Scuola democratica*, *2014*(2), 321–342. https://doi.org/10.12828/77420

UVAL. (2014). *A strategy for inner areas in Italy: definition, objectives, tools and governance*. https://www.agenziacoesione.gov.it/wp-content/uploads/2020/07/MUVAL_31_Aree_interne_ENG.pdf

van de Werfhorst, H. G., & Mijs, J. J. (2010). Achievement inequality and the institutional structure of educational systems: A comparative perspective. *Annual Review of Sociology*, *36*(1), 407–428. https://doi.org/10.1146/annurev.soc.012809.102538

Viesti, G. (2021). *Centri e periferie: Europa, Italia, Mezzogiorno dal XX al XXI secolo*. Gius. Laterza & Figli Spa.

Vigna, N. (2023). Subjective social status in places that don't matter: Geographical inequalities in France and Germany. *European Societies*, *25*(5), 693–720. https://doi.org/10.1080/14616696.2022.2163276

Wells, R. S., Chen, L., Bettencourt, G. M., & Haas, S. (2023). Reconsidering rural-nonrural college enrollment gaps: The role of socioeconomic status in geographies of opportunity. *Research in Higher Education*, *64*, 1089–1112. https://doi.org/10.1007/s11162-023-09737-8

Willms, J. D. (2010). School composition and contextual effects on student outcomes. *Teachers College Record*, *112*(4), 1008–1037. https://doi.org/10.1177/016146811011200408

Wodtke, G. T., Yildirim, U., Harding, D. J., & Elwert, F. (2023). Are neighborhood effects explained by differences in school quality? *American Journal of Sociology*, *128*(5), 1472–1528. https://doi.org/10.1086/724279

About the Authors

Stefano Cantalini is an assistant professor of economic sociology at the University of Milan (Italy). His research focuses on various aspects of social inequalities, family formation and fertility, the labour market, and migration.

Nazareno Panichella is a full professor of economic sociology at the University of Milan (Italy) and Scientific Coordinator of the research group on Geography and Social Inequality in Italy (GESI). His research interests include social stratification, migration, geographical mobility, sociology of labour, and inequality of educational opportunities.

Andrea Pietrolucci is a postdoctoral researcher at the University of Milan (Italy) in the ERC Consolidator Grant EDUPOL—Education Policies That Work: A Context-Sensitive "Big Data" Approach (2024–2028). His main research interests focus on inequalities in educational opportunities, geographical disparities, and wealth inequality.

Moris Triventi is a full professor of sociology at the University of Milan (Italy) and principal investigator of the ERC Consolidator Grant EDUPOL—Education Policies That Work: A Context-Sensitive "Big Data" Approach (2024–2028). He has published extensively on topics related to social stratification and inequality, education, and impact policy evaluation.