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# Who Choose Private Schools in a Free Choice Institutional Setting? Evidence from Milan

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# Who Choose Private Schools in a Free Choice Institutional Setting? Evidence from Milan

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**Abstract:** The issue of school choice is a much-debated topic. Literature highlighted both its advantages for families and the critical issues generated by the actual choices of parents. The choice of private schools is a peculiar form of school choice because it often also implies the payment of fees. By focusing on primary schools, the article analyzes the socio-economic and ethnic composition of private school student-body in an institutional context based on free parental choice such as the city of Milan (Italy). The research highlights that even in a context allowing families free movements in the state system, private schools are a widespread choice by a heterogeneous slice of families, mainly belonging to the middle-upper classes. The factors characterizing these choices are the presence of a high socio-economic intake and the low presence of foreigners in such schools, while performances in standardized tests seem not to be the main driving factor. Finally, even within the private system, there is a tendency towards polarization between the middle and upper classes.

**Keywords:** private schooling, school choice, Milan, socio-economic backgrounds, segregation

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## 1. Introduction

The debate concerning school choice is controversial. The positive effects of school choice are identified in an increased competition between schools as a vehicle to improve the overall quality of the education system because schools are pushed to perform better to attract students. However, the effects of competition on the overall quality of school system are mixed (Böhlmark and Lindahl, 2015; Cullen et al., 2006; Hoxby, 2000; 2007; Hsieh & Urquiola, 2006; Rothstein, 2007). Proponents of school choice also argue that it allows parents to select schools better corresponding to their wishes and to the needs of their children. Freedom of education is presented as a human right (Glenn & De Groof, 2012).

However, school choice is often linked to an increased segregation in the education system (Wilson and Bridge, 2019). First, schools in competition with each other could apply the so-called “cream-skimming”, favoring the enrollment of students with backgrounds considered as more desirable (Whitty, 1997).

Second, increased segregation is also the result of parents preferring certain compositions of student-body. Furthermore, families with high socio-economic profiles enjoy more resources to frame their choices. School choice is framed by economic, social and cultural resources. Economic resources are linked to the ability to select fee-paying schools and to apply residential strategies (moving residency into neighborhoods where preferred schools are located in order to improve the likelihood to be enrolled in them). In terms of social resources, the access to information about schools is often based on personal networks. High-income families usually have more information, more social contacts, more resources to obtain the information they are searching for (Bishop, 2008; Lareau, 2014). As explained by Bourdieu and Passeron (1970), upper and middle class hold a better knowledge of the scholastic system giving them a further advantage in terms of school choice as they can build strategic relationships with the school system. All these factors lead to middle class households being usually considered as more active choosers (Lareau, 2014; Van Zanten, 2013). If education system replicates the stratification present in societies, it loses its function as social elevator (Ribolzi, 2019). Through school choices, parents can reproduce inter-generational inequalities.

Within this framework, the role of private schools is widely debated. Indeed, they express the tension between the freedom of choice and the equal opportunity aim. Some argues that they are drivers of social injustices given they are places where pupils from social advantaged backgrounds can receive better educational benefits and increase their social capital based on class mechanisms (Exley & Suissa, 2013). However, building on the classical

Liberal viewpoint, others argue that parents have the right to determine their educational choices and select the educational environment they consider most optimal for their children. This stream of literature argues that private schools increase competitiveness, and this can be seen as an incentive for the improvement of public education system leading to benefits also for students attending state schools (Holmes et al., 2003; Ruijs & Oosterbeck, 2019). As shown by Couch (1993), educational achievements in public schools are higher in areas where the quota of children enrolled in private schools is higher. Some of the reasoning behind the policy strategy of providing vouchers to families in order to increase the chances of medium/low-income families to enroll their children into private schools is that this move would push state schools to improve in order to “retain” these students.

Given that the choice of private education is a specific form of school choice as it usually involves the payment of fees, what type of families choose private schools become an interesting question. This can vary between countries depending on the institutional settings framing the education systems. Policies guiding enrollments into state schools could play a role in shaping private schools’ student-bodies. Furthermore, private education systems are extremely different, especially in terms of levels of fees, spread and relationship with the public offer. In brief, Dronkers & Avram (2010) summarized two choice mechanisms of private (non-subsidized) schools: one based on social class reproduction and one based on outsiders’ choice for well-equipped schools.

This contribution aims to study the make-up of private education student-body in a public education system characterized by free parental choice. We do that by focusing on the case of primary education in Milan, Italy. It is a particularly interesting case study for several reasons. First, private schools are not the only choices for parents opting out the local state schools. Second, the compact configuration of the urban fabric of Milan facilitates reaching the different points of the city and therefore schools. Furthermore, from a residential point of view, segregation levels are not as high as in other European metropolises (Musterd, 2005). Milan is traditionally a socially mixed city, with a strong middle-class presence, relatively few deprived clusters (Mugnano & Costarelli, 2018; Torri & Vitale, 2009) and an increasing ethnic presence (Cordini et al., 2019). Finally, the supply of private schooling is widespread and well-established in the city and can be accessed based on fees that could be considerably higher than the costs of attending a state school.

In sum, in an institutional framework in which the public school system is comprehensive, in which families are not forced in most cases to enroll their children in the neighborhood school if they want to stay in the state system and where access to private schooling can be economically onerous for parents, it is interesting to understand who opts for private education

and in what extent they are different from those who move within the public system. What are the main features of private schools which distinguish them from the state offer in shaping school selection? Is private schooling chosen by only upper class or also the middle class can access it? If so, do middle class and the “elite” mix in the private system or do they distribute within it into different schools?

The article is structured as follows. In next section we summarize the main debate in relation to private schools focusing on their educational performances and their role as strategies to search for homogeneous school environments. Then we briefly present the Italian institutional educational setting and the role private schools play within it (section 3). After presenting the data used (section 4), we introduce the case study (section 5). In the analysis we focus on the main characteristics of the students enrolled in private schools (section 6), on the features of private schools effectively chosen (section 7) and on the distribution of students within the private school system (section 8).

## **2. Private school choice**

In this section we recap the main debates around private schooling addressed in the literature. First, we consider the role played by fees in shaping their student-body (section 2.1). We then focus on two of the main drivers of school choice (Burgess et al, 2015): the effectiveness of schools in improving students’ learning performances (section 2.2) and the search for specific socio-economic school environments (section 2.3).

### **2.1. The role of fees**

The relative costs of private schooling play a crucial role in limiting or encouraging their choice by parents.

Overall, literature recognizes that income is the main driver of the choice of private schooling (Agasisti & Murtinu, 2015) as wealthy families enjoy more options when searching for schools which match their aims, values, social aspirations and desired outcomes (Levchenko & Haidoura, 2016). However, it is the level of fees which plays a role in shaping who can access to the private education system. If fees are lower, the quota of parents potentially in-between public and private system would be larger. In these cases, flows to private schools can be an indicator of performance and disaffections towards the public system (Hoxby, 1994) because in these scenarios, private schools may become a real alternative to public system. Indeed, where performances of local public schools in test scores are low, enrollments in private schools tend to be higher (Rutkowski et al., 2012). However, if economic barriers shapes access to private schooling, the link between public schools’ perfor-

mances and option of private schooling becomes patchy. Private schools can only work as a stimulus to improve the performance of state schools where access to private education is accessible to most (West & Woessmann, 2012).

Therefore, the take-ups of private schooling and the make-up of the families opting for them vary between contexts depending on the costs of private schooling supply (Butler & Hamnett, 2007). In some countries, such as Spain and Greece, private schools are widespread and less expensive. Therefore, parents from middle and lower backgrounds can also afford them. On the other hand, in countries such as in United Kingdom, they are more selective and heterogeneously distributed leading to them being more elitist choices targeting families with high socio-economic backgrounds. If private schools offer better educational opportunities, this means increasing the gap between well-off families and disadvantaged groups who can't access them (Ribolzi, 2019).

The distribution of private schools' supply is also an important factor in shaping enrollments as proximity to private schools increase the rates of their choices (Agasisti & Murtinu, 2015).

Differences emerge not only between countries but also between regions and cities as local measures can be introduced to soften the costs of private schooling. Indeed, given the key role played by fees, different instruments have been proposed, especially in the United States, to limit the burden of fees on parents' budgets and therefore opening the choice of private schools also to less wealthy families. One major step in that direction is the availability of government-supported vouchers that can help families to partially cover the costs of private schools. The voucher system is promoted to increase schools' quality by encouraging competition between them and to promote better matching between schools offers and students' needs (Mills & Wolf, 2017; Moe, 2005). However, the design of the voucher system impacts its effectiveness in opening private education to the most disadvantaged. Relevant factors include voucher values, voucher caps, student's eligibility, schools allowed in the programs and the criteria related to which schools vouchers can be used in (Egalite & Wolf, 2016).

Vouchers are not the only instruments introduced to limit the burden of private education's costs. Programs with similar aims include tax breaks for families enrolling their children in private schools or scholarships funded by state and local government (Egalite & Wolf, 2016) or by no profit organizations.

## **2.2. Increasing performances and achievements?**

Private schools are often seen by parents as better in terms of producing learning outcomes, less "at risk" behavior among their students and promoting social citizenship. These were among the arguments put forward to

support the charter schools in USA (Dynarski, 2016; Flanders & DeAngelis, 2017; Levchenko & Haidoura, 2016; Lubienski & Lubienski, 2013).

Some scholars suggested that presence of private schools also incentivizes the public system in performing better leading to a raise of overall students' achievements and productivity (Hoxby, 2003). The reasonings behind this is that public schools would lose students if their performances were not on par with those of their competitors and this should lead them to either improve or being substituted by parents affording alternatives. Focusing on US, Hoxby (2003) finds that in areas with higher enrollments in charters and private schools, the level of students' achievements registered in public schools is higher compared to similar areas with less availability of private schools. In the case of competition with charter schools, the performances are improved also compared to previous trends of the same public schools. However, literature is not in agreement on this aspect as other studies showed different outcomes (Geller et al., 2006; Sander, 1999).

Furthermore, past research do not show a definite picture in terms of superiority of private schools in terms of performances of students after controlling for peer effects and selection biases (Pianta & Ansari, 2018; Abdulkadiroglu et al., 2015; Berends & Waddington, 2018; Carolson et al., 2017; Figlio & Karbowinc, 2016; Lubienski & Lubienski, 2013; Mills & Wolf, 2017).

Research on this topic is particularly developed in the United States. Elder & Jepsen (2014) find that attending Catholic primary schools do not increase test scores and has a negative effect on mathematics achievements. Altonji, Elder & Taber (2005) find mixed effects of attending Catholic high schools: their students show a significant higher probability of graduating from high school and attending college, but no positive effect on test scores is noticed.

Lubienski & Lubienski (2013) analyze test scores in mathematics and find that after controlling for socio-economic and demographic characteristics, the advantage of private schools disappears and sometimes become negative.

Overall, at elementary and middle school level, charter, magnet and catholic schools have different levels of mean performances, even after controlling for students' backgrounds (Berends & Waddington, 2018). Variety of classroom environments is mentioned by Pianta & Ansari (2018) as a possible explanation for lack of a coherent effect of private schools not only on performance but also on attitudes and risky behaviors.

Research based on experimental methods such as lottery designs are also consolidated in the American literature evaluating the impacts of vouchers on students' achievements. Using the case of Louisiana (grades 3-8), Dynarski (2016) and Abdulkadiroglu et al. (2015) find a significant negative effect on student achievements. This is especially evident in the first two years of the students' school careers. Similar trends (but with less intense negativity) are found by Berends & Waddington (2018) in Indiana (on mathematic scores;

grades 3-8) and by Figlio & Karbowinc (2016) in Ohio (on math and language tests). However, some positive patterns also emerge. In New York, black students attending private schools thanks to vouchers show higher college attendance, less drop-out rates and better test scores than their counterpart in public schools (Dynarski, 2016). Mills & Wolf (2017) find that after the first two years, Louisiana and Indiana students enrolled in private schools perform better than comparable peers attending public schools. On the other hand, other studies do not find that length of enrollment is positively associated with higher performance once family income is controlled for (Pianta & Ansari, 2018; Lubienski & Lubienski, 2013).

Different outcomes are, at least partly, affected by specificity of the schools involved in the programs as shown in Louisiana: schools which took part in the early years of the program were generally lower performing and this negatively impacted the performances of the first students enrolled, while the subsequent improvement was led by the availability of more performing private schools among the set parents could choose from (Abdulkadiroglu et al., 2015).

Studies on other geographical contexts are more limited. However, similar heterogeneous trends emerge.

Outcomes vary according to the type of private schools. Dronkers & Robert (2008a, 2008b) analyze PISA 2000 data on 15 years old students in OECD countries and find that private government-subsidized schools perform better than public schools even after controlling for social composition. Larger effects were found for children with low cultural capital (Corten & Dronkers, 2006). They find that the school climate is the main driver to private schools' over-performance (Dronkers & Robert, 2008b). On the other hand, they find independent schools as less performing than comparable public schools. Analyzing PISA 2012 data (related to 15 years old students) in Mathematics, Sakellariou (2017) finds that private independent schools are the less performing in PISA tests compared to private dependent schools and public schools.

Studying PISA 2003 results, Woessmann et al. (2009) found that increase of choice through funding to private schools contribute to soften the link between achievements and socio-economic status (Glenn & de Groof, 2012).

Literature also shows differences between countries. After controlling for family socio-economic-cultural backgrounds, parents' attitudes, class size, number of schools present in the local area, teachers' characteristics and school offers, Sakellariou (2017) finds that in Belgium, Canada, Argentina and Brazil, private-dependent schools still have a positive advantage in students' academic performances. On the other hand, in Czech Republic, Germany, U.A.E., Costa-Rica, Mexico, Taiwan and Thailand, they are found to be less performing. In most countries, no significant differences emerge between private and public schools. A positive over-performance by independent



schools is found in Belgium, Greece, Canada, Ireland, New Zealand, Qatar, Brazil and Indonesia but not in the other countries taking part to PISA survey. Peer effects is the main drivers on the apparent over-performance of private schools.

Heterogeneous effects of attending private schools on achievements are also found by Vandenberghe & Robin (2004) analyzing 2000 PISA data. Once controlling for selection bias, they find a positive association between attending a private school and acquiring better competences in Brazil and Belgium while in Mexico, Spain and Denmark no significant differences emerge. In France, Ireland and Netherlands, no clear picture emerge as different statistical models result in different outcomes.

Negative trends are found in Australia (Ryan, 2013): PISA 2000's mathematical scores declined more in private schools even if socio-demographic features didn't point towards such decrease.

In Italy, few studies have attempted to analyze private schools' performances. Bertola et al. (2007) find that secondary private schools are less able to reward talent than state schools in terms of enrollment into tertiary education. This contributed to private schools being chosen by wealthy parents with less able children (Bertola et al., 2007, Brunello & Checchi, 2005). On the other hand, Di Pietro & Cuttillo (2006) found that attending Catholic private schools plays a positive effect on enrolment in universities even if not being particularly related to school's quality, while no statistically significant effect was found on limiting university dropouts.

Specifically studying students' achievements in primary schools, Agasisti et al. (2016) found that private schools have heterogenous effects. The authors found a small positive effects on reading for children with immigrant background (especially second-generation children) and pupils living in rural areas and on mathematics for students with lower socio-economic backgrounds.

To sum up, apparent better performances of private schools is mainly explained by the socio-economic make-up of these schools. The literature on the effect of vouchers presents a mixed picture with positive outcomes only in some cases (Dynarski, 2016; Mills & Wolf, 2017). However, it must be noted that private schools are not a homogenous block with outcomes different according to the type of private school.

### **2.3. Search for socio-economic homogeneity**

The composition of school student-body is one of main drivers of school choice (Lobato & Groos, 2019; Boterman, 2013).

High socio-economic composition of the student-body is generally associated with the choice of private not-subsidized schools (Dronkers & Avram, 2010).

The search for specific socio-economic composition of schools and classes is shaped within strategies aimed at avoiding social contamination (Butler & Hamnett, 2007). This is linked to a set of concerns by privileged groups about exposing their children to children from social class or racial groups who may be seen to exert a detrimental effect on their children's performance.

The search for certain socio-economic school composition is a strategy particularly present in contexts where data about school performances in standardized tests is not easily available to parents (Boterman, 2019). Therefore, they resort to socio-economic make-up of schools as main guiding driver for their choices.

However, these avoidance strategies are not limited to parents juxtaposing socio-economic features with school learning quality because of lack of information. Middle-class parents, usually - but not necessarily - white, are concerned that their children could be held back by a concentration of foreign pupils (whose first language is not the national language) or by groups of pupils with little interest in learning or who have different behavioral norms. The fear is that such exposure would result in failing to progress at the rate desired (Butler & Hamnett, 2007). This concern goes further than just trying to find the most performing school but indeed it translates into a strategy aimed at searching for social homogeneity and class affinity. As shown by Ball & Vincent (2007) in their work on inner London gentrified districts, the attraction of some schools only partly lies in their results on standardized tests but is mainly a function of the social mix of the children enrolled. Middle class parents do not tolerate schools that are 'inappropriately' mixed, either ethnically or by class (Butler et al., 2013; Butler & Robson, 2003).

Moreover, education can also become a pathway for social class reproduction. The greatest fear for middle and upper class is that of downward mobility. As a result, their educational strategies are built to avoid such occurrence. Building on Bourdieu, education is seen as contributing to economic, social and cultural capital in class reproduction (Bridge & Wilson, 2019). Therefore, not only best schools can contribute to increase the cultural capital of children, but also mixing with some specific groups of children (and families) can contribute to increase or keep the differences between groups in terms of social capital.

As fees are involved in accessing to private schools, students are often skimmed by income levels (Pianta & Ansari, 2018). Therefore, private schools can become a vehicle to avoid mixing with unwanted social groups. When middle class applies residential strategies, they usually choose middle class dominated neighborhoods to be sure that in any local state school to which their children could be assigned, they would be exposed mainly to school-mates with privileged backgrounds (Webber & Butler, 2007). The op-

tion of private school allows achieving the same purpose. They can be seen as “social enclaves” where certain values and ethos are more likely to be transmitted (Ball & Vincent, 2007). Indeed, the value system is one of main driver when choosing private schools. As stated by Glenn (2012), schools teach more than just academic subjects. Values, routines, attitudes are often learnt within the school environment.

Studying three Italian cities, Pandolfini (2013) find that “ideological coherence between school educational program and family values” is among the most declared school choice criteria declared by parents who choose private schools. Providing a quiet and safe environment – more likely present in private schools (Shakel & De Angelis, 2018) - is another reason often stated by parents opting for private schools (Pandolfini, 2013; Bukhari & Randell, 2009; Vidoni, 2003; Valli, 1991). The school’s philosophy is one of the main drivers towards independent schools (Dronkers & Avram, 2010). The importance of value system is particularly evident in the selection of religious schools (Pianta & Ansari, 2018) for which religious affiliation is often an important driver (Agasisti & Murtinu, 2015). The decision to select private Catholic schools is also linked to the conviction that these are better able to favor the development of a certain moral character and conscience.

### **3. Education system in Italy**

In this section we outline the main features of Italian primary education system (3.1) with a special focus on the role of private schools (3.2).

#### **3.1. Italian primary education system**

Primary education starts at 6 years old and lasts 5 years. It follows a comprehensive approach. Main difference between state supply regards opening hours which range from 24 to 40 weekly hours.

Traditionally, Italian school system has been centrally managed with little local autonomy (Vidoni, 2003). In 1997, a reform was introduced to give greater autonomy to school institutions. However, in practice, state schools enjoy limited freedom (Vidoni, 2003). They do not have significant autonomy in setting curricular activities as they have to follow ministerial guidelines. Furthermore, they don’t independently recruit teaching staff which is instead assigned to them by local branches of Education Ministry. Finally, they also have limited financial autonomy. Indeed, measures towards more schools’ autonomy have been developed within an institutional context based on central control on learning objectives and teaching times (Vidoni, 2003).

Catchment areas (hereafter CAs) were the main criteria to allocate children to state primary schools until the late 80s. However, since then, their role has been greatly reduced. Nowadays, parents can apply for every school.

Schools must set criteria for selection in the case demands outnumber spots available and physical constraints (not enough rooms, for instance) don't allow the school to ask to the regional office of Education Ministry to activate more classes. Living in the catchment area of the school is usually one of the top criteria in these occasions. In defining catchment private schools are not considered.

Within these quasi-market arrangements, information about the educational quality of schools is scarcely available. The public data about the schools' educational outcomes are diffused at the school level through the ministerial platform for enrollments which can be difficult to navigate, especially by parents with low education or ethnic background.

### **3.2. The role of private schools within the Italian education system**

The private offer is added to the public offer. Since 2000 (law 62/2000) private schools are divided into two groups: accredited (the so-called "paritarie") and not accredited ("non paritarie"). The accreditation of private schools with Education Ministry guarantees the equalization of students' rights and duties, the ability to carry out the final exams and the authorization to issue qualifications having the same legal value of those granted by state schools. Requirements needed to obtain the accreditation include planning an educational offer plan compliant with current ministerial regulations.

As they are recognized as performing a public service, accredited private schools obtain some funding by the Education Ministry. The amount received is defined annually by the Ministry by a specific yearly decree that sets the criteria for the assignment of contributions to private schools. In allocating money, pre-schools and primary schools are prioritized. A further monetary contribution is given to schools based on the number of disabled students enrolled. On average, in 2017/18 each accredited private primary schools in Milan received 1,046 euro per student (covering 16% of the average standard costs per student estimated by Education Ministry with Decree n. 380/17)

Non-accredited private schools are registered in regional lists updated every year. The attendance of these schools allows the fulfillment of compulsory education, but they can't issue qualifications. That means that their students must take the final exams in a state school.

Catholic Church has traditionally played a leading role in setting up and running private schools. For instance, 75% of private primary schools in Italy are run by catholic groups (CSSC, 2019).

Attendance to private schools requires the payment of enrollment fees that is decisively higher than the administrative costs required to access to state schools. Fees are decided by each school. Their range is particularly

heterogeneous and they can reach up to more than 10,000 each year for most selective schools (see section 5 for more details).

Teaching staff is freely selected by each school with the only requirement of privileging certified teachers. However, salary is decided by collective national contracts (one for religious private schools and one for not religious private schools). Basic pay is lower than that in state schools.

In Italy there are no national provision aimed at financially supporting parents enrolling their children in private schools. However, some regional administrations introduced measures with such aim. In particular, the orientation of Lombardy regional administration (the region where Milan is located) was favorable to private schooling pushing for an effective parity between public and private schools and attempting to favour access to private schools also for students with lower socio-economic backgrounds. (Agasisti & Muritnu, 2015).

To further incentive free choice, vouchers (called “buono scuola”) were introduced in 2000 targeting families who choose a fee-paying school in order to soften the burden of fees as they covered 25% of the fees (Vidoni, 2003). In 2008 the measure was reformed and renamed “dote scuola”. The voucher is limited to accredited private schools and it is paid before the start of the school year. The amount each family (table 1) is entitled depends on their income levels (measured through ISEE index).

*Table 1– Amount in Euros given by regional administration to families who enrolled their children into accredited private schools*

ISEE	Primary	Lower secondary	Upper secondary
<8000 euros	700	1600	2000
8000-16000	600	1300	1600
16.001-28.000	450	1100	1400
28.000-40.0000	300	1000	1300

*Source: Lombardy region, call for 2018/19 year.*

To sum up, the Italian system can be classified as a third way between models where private schools benefit from strong public fundings and central states’ monitoring and models in which they are entirely autonomous and don’t benefit from any public financing (Fabretti, 2011; Dronkers et al., 2010). Most private schools are well embedded in the Italian school system. Their curricular educational offer mainly reflects that of public schools as

they follow ministerial guidelines. In the Italian educational system in which the curriculum is fairly standard and is modulated on ministerial indications, schools differ in particular on the basis of the extra-curricular activities as well as the teaching methods and approaches. In this respect, private schools have more freedom in increasing their appeal, as the state schools are constrained by their ability to raise the necessary funds for extra activities. Furthermore, not-accredited private schools can also leverage their choice of curricular extra-ministerial options, especially in primary education where there are no selective examinations at the end of the cycle.

#### 4. Data and methods

Data used in this analysis comes from the School Register of the Municipality of Milan (hereafter AnaSco) and from Invalsi (National Institute for the Evaluation of the Education and Training System) datasets. The analysis focuses on children enrolled in primary schools.

Invalsi administers yearly a standardized test in the second and fifth grades of primary school to measure learning outcomes. They also provide background information about the families of students undertaking the tests. The tests are administered in state schools and accredited schools.

AnaSco is updated every year by the Department of Education of the Municipality of Milan. It contains information on all mandatory school-age children resident in Milan and all those who are enrolled in primary schools located within the municipality. Information included are: year of birth, gender, citizenship, country of birth, CA and school of enrollment. Data used in this paper refers to 2015/16 update. For the analysis, we supplemented AnaSco dataset with additional data about average scores in Invalsi tests and average socio-economic level of students of each school.

This paper is based on two main analyses. First, a logistic regression is run on Invalsi individual datasets (2018/19 school year) to identify the characteristics of parents most associated with the choice of private schools. We consider as independent variables: the country of birth, the employment conditions<sup>1</sup> and the education levels of both parents.

Second, using AnaSco, a logistic regression is run on children not enrolled into their local state schools. The dependent variable is represented by 0=enrollment into a state school outside the CA and 1=enrollment into a private school. The aim of this analysis is to understand the influences

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<sup>1</sup> The variable is structured as follows: a) unemployed b) houseperson c) manager, university professor, civil servant or military officer d) entrepreneur / agricultural owner e) employed or self-employed professional (doctor, lawyer, psychologist, researcher, etc.), military non-commissioned officer f) self-employed (trader, farmer, craftsman, mechanic, etc) g) teacher, office worker h) manual worker, service worker / cooperative partner i) retired

on the likelihood to select a private school exerted by the features of local state schools (in order to check if they are used as avoidance strategies) and by the characteristics of chosen schools compared to the local options (in order to assess what are their most attractive features). On the latter, for each variable considered, the gaps are computed by subtracting the values registered in the local state school to those of the school of enrollment. The values obtained are then standardized to better compare the intensity of the coefficients. Variables considered are:

- Average socio-economic level of students enrolled, estimated through Invalsi's ESCS<sup>2</sup> index (year 2011/12 and 2012/13);
- Average performances in standardized Invalsi tests (2011/12 and 2012/13);
- Quota of foreign students (2011/12);
- Socio-economic homogeneity measured by the difference between the quota of students with high socio-economic backgrounds (represented by fourth and fifth quintile of the ESCS distribution) and the share of lower-middle class students (belonging to the second and third quintile).

Control variables include the year of birth, the country of birth, gender, the home-to-school distance and the share of incoming students in the local state school from other catchment areas.

We selected only individuals in grade 1 and II in 2015/16 school year while schools' features used as predictors are based on 2011-2013 period. This is necessary to avoid endogeneity, meaning that schools' characteristics aren't estimated on students whose choices we analyze through the dependent variable. In this second regression model, we consider only Italian students or those with citizenship from some other OECD countries<sup>3</sup> given the choice of private schools is mainly an Italian phenomenon in Milan.

Only private accredited schools are considered in both regression models because of availability of Invalsi data. However, the number of non-accredited private schools in Milan is limited (see section 5).

## 5. Private schooling in Milan

Milan is characterized by a relatively large provision of private schools. There are 75 primary private schools (out of 218 schools located in the city). The great majority of Milan private primary schools are accredited (67).

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<sup>2</sup> This index summarizes three indicators: parents' occupational status (similar to the HI-SEI index used in PISA tests); parents' education level; possession of goods considered as indicators of an economic and cultural context favorable to learning such as encyclopedias, books, computers, internet connection, desk and a personal room in which to study. Overall, a student with a high positive individual ESCS value is a student with a high socio-economic-cultural background.

<sup>3</sup> Western Europe, North America, Israel, Japan, Korea, Australia, New Zealand.

In line with national picture, Catholic Church plays a considerable role in providing school offer: schools run by Catholic institutions are the majority (44). However, a significant number of private schools are managed by secular institutions. A small number of them are inspired by religious values, while many are oriented towards specific forms of offer. The latter include specific teaching methods such as Montessori schools (5 primary schools) or those of Steinerian inspiration (3). 11 primary schools are bilingual (Germany, France, Switzerland, Great Britain). Among the non-Catholic religious schools there are three Jewish and an Arab school. Two schools are explicitly gender based.

The local offer of private schools also shows a noticeable variation in the fees required. The annual payments usually range between 2,500 and 5,000 euros. However, in some private schools, especially those with bilingual curricula, fees can be up to 17,000<sup>4</sup>.

The enrollment in private schools is significant. In 2015/16 school year the share of resident children attending private schools is 18.9% (10,362 children<sup>5</sup>) with particularly high incidences (over 30%) in wealthy central areas of the city (see figure 1<sup>6</sup>). This compares with an average quota of pupils enrolled in private schools in the whole country equal to less than 8% in primary schools (ISTAT data warehouse) The highest incidence of private schooling in more economically developed contexts like Milan is consistent with the findings on Northern Italy (Agasisti & Murtinu, 2015) and in other countries such as Great Britain (Butler & Hamnett, 2007).

In peripheral areas of the city, few CAs show significant quotas of children attending private schooling and these areas tend to be characterized by the presence of a private school nearby (see dots on maps in figure 1) with the exception of the Southern part of Milan.

Overall, 95.8% of those attending private schools in Milan are Italian.

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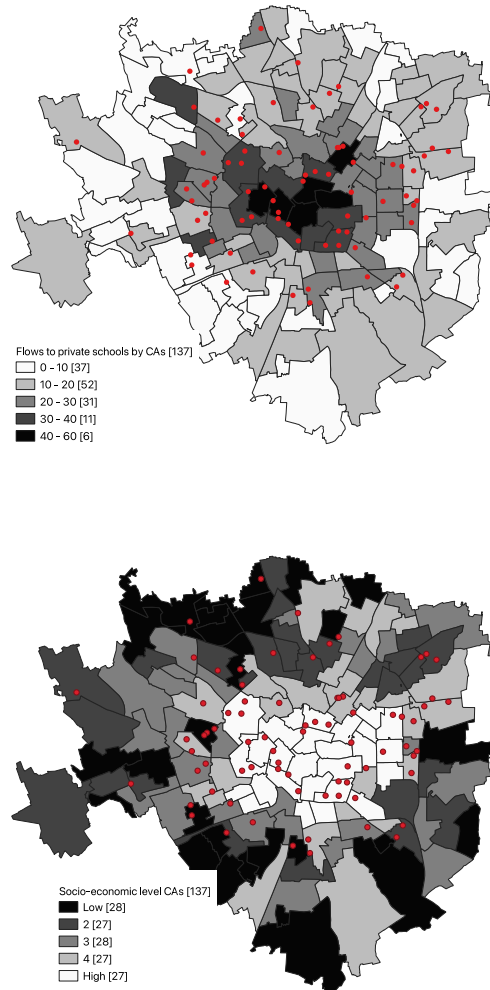
<sup>4</sup> Data from 31 private primary schools. Information collected through schools' websites and contacting administrative offices

<sup>5</sup> High flows to private schooling are a well-established phenomenon in Milan. Indeed, the quota of Milanese residents in primary school-age enrolled in the city's private schools is 16.8% in 2000/01, 19.1% in 2006/07 and 20.1% in 2012/13 and 19.6% in 2018/19.

<sup>6</sup> Socio-economic index computed using 2011 Census data on employment, occupations and education.



Figure 1 – Primary schools catchment areas by quotas of resident children aged 6-10 enrolled into a private school (shades of greys); Catchment areas by socio-economic level (bottom). Dots represent private school locations.



Source: our elaborations on AnaSco data

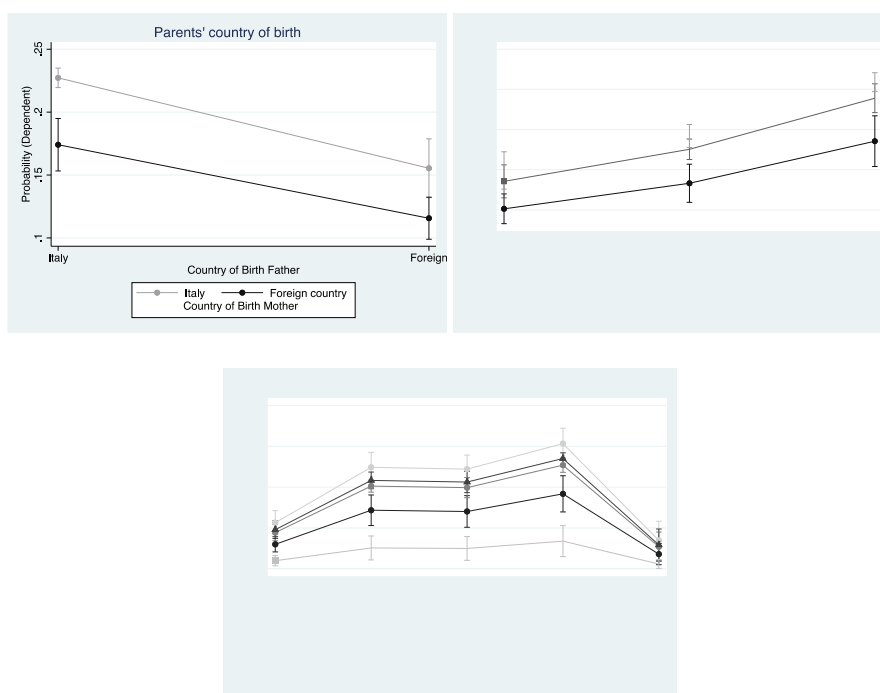
## 6. Who attends private school?

A logistic regression model has been run on the probability to be enrolled into a private school based on family backgrounds considering the combined effect of both parents (figure 2). The chance of attending a private school is extremely low when both parents were born abroad and is higher when

both parents were born in Italy. The chances of choosing private schooling increases when both parents achieved tertiary education or when one parent holds tertiary education and other parent achieved at least a high school diploma. Not considering the combination of professional and occupational status with few cases (and therefore high confidence intervals), it can be noted that having a parent who is manager, professional or entrepreneur is associated with a higher share of private schooling also after having controlled for education and country of origin. In particular, it is the case when said condition is possessed by a father coupled with a mother who is in a similar occupation or a white collar. Also, when both parents are self-employed or when a self-employed father is married to a clerk, the chances of sending their children to private schools are higher.

These findings are in line with results from Agasisti et al. (2016) and from Pandolfini (2013). The latter research analyzed Genova, Turin and Bologna highlighting that parents belonging to higher service class and with university degree show a higher rate of choosing private schools for their children.

Figure 2– Marginal effects estimated through a logistic regression model on having your children enrolled in a private primary school. Grade V, school year 2018-19.



Source: our elaborations on Invalsi data

To sum up, 60% of private school students belong to the fourth or fifth quintile of the students' distribution by socio-economic-cultural level (using

Invalsi's ESCS index). Only 35% of state school students are from the top two quintiles (table 2).

The weight of the intermediate groups (identifiable with those classified in the third quintile) on the total number of enrollments in private schools is similar to that registered among state schools' attendees. On the other hand, the difference is considerable for the bottom extreme of the distribution. Indeed, only 6% of those enrolled in private schools are among the students with lowest socio-economic backgrounds (quintile 1) while the weight of the fifth quintile is twice in private schools compared to state schools.

*Table 2- Primary school students classified by their ESCS individual score. Classes in quintiles (lowest to highest)*

	Private schools %	State schools %
Q1	5.7%	23.5%
Q2	13.9%	20.7%
Q3	19.0%	20.3%
Q4	32.4%	21.5%
Q5	29.0%	13.1%

*Source: our elaborations on Invalsi 2018/19 data*

This picture is in line with expectations given the role that fees can play in selecting users and the limited role of public subsidies to private education in Milan. The significant costs of private school (not covered by the limited public financial support for families opting for private schools) skim users upwards. The same trend is true for families of immigrant origin who tend to be in the economically lower segments in Milan (Mugnano & Costarelli 2018). That said, the share of the potential middle class who access private schools is still significant. In fact, 1/3 of users come from the second and third quintiles.

## **7. What are the attractive features of private schools?**

The picture emerged so far points toward a strong link between choice of private schools and socio-economic status. In this section we focus on the outcomes of the choice made by Italian parents, in order to cast some light on what aspects may lead to their preferences for private schools. Specifically, at individual level, we run a logistic regression model on those who opted out their local state schools in order to estimate the probability to choose a private school rather than into another state school (table 3).

Table 3 – Logistic regression model on the probability to attend a private primary school for students not enrolled in the local state school. School year 2015/16. Italian students.

	(1)	(2)
VARIABLES	B	B
<b>Individual variables</b>		
Gender (reference category: male)		
Female	-0.041	-0.064
	[0.046]	[0.055]
Year of birth (ref. Cat: 2008)		
2009	-0.091**	-0.139**
	[0.046]	[0.055]
Born abroad	-0.321*	-0.267
	[0.209]	[0.257]
Home to school distance (standardized)	0.254***	0.264***
	[0.027]	[0.033]
<b>Local state school</b>		
Local school socio-economic level (standardized)	0.325***	1.726***
	[0.054]	[0.082]
Local school Invalsi performance (standardized)	0.252***	0.522***
	[0.035]	[0.061]
% of pupils residing in other CAs	-0.064***	-0.090***
	[0.025]	[0.030]
<b>Gaps between school of enrollment and local state school (all standardized)</b>		
Socio-economic level		0.548***
		[0.031]
% of foreign students		-1.596***
		[0.048]
Invalsi performances		-0.603***
		[0.042]
Homogeneity index		0.100***
		[0.023]
Constant	-0.261	-1.662***
	[0.211]	[0.261]
Observations	8,756	8,756

Standard errors in brackets. \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$

Source: our elaborations on AnoSco and Invalsi data

Model 1 highlights that the preference for a private school is not linked to geographical distances. The increase in the home-to-school distance is associated to a greater likelihood of choosing a private school. Indeed, those selecting private schools live on average 2.055 km away from the school where they enrolled their children, while families opting to move to non-local state schools select a school which is on average 934m away from home.

Families choosing private schools for their children are more likely to live in areas where the local state school has a better than average socio-economic profile of the student-body. This is unsurprising given the areas with highest flows to private schools are located in city center (figure 1). Furthermore, parents choosing private schools also live in areas where the local state schools show slightly better performances in standardized learning tests compared to those opting to move within the state system. This seems to indicate that opting for private schools is not a strategy put forward to avoid particularly struggling state schools.

As mobility within the state system is mainly driven towards city center schools located in affluent CAs (Cordini et al., 2019), this could potentially be a factor favoring the mobility towards private schools by local wealthier parents who may not appreciate the incoming influx of students from peripheral areas. However, there is no evidence of such dynamic as children living in CAs where local state schools attract more students from outside areas are more likely to move to other state schools rather than in the private system.

What are the distinctive features of the private schools chosen? How do they differ from CA schools? To understand this, we add to the regression model a series of variables representing, for each student, the gaps on a set of variables between the school of enrollment and the local state school.

Model 1 showed that families choosing private schools tend to live in areas where the local state school has a wealthier students' composition. The schools chosen have an even higher socio-economic profile. The more positive is the gap (meaning a higher ESCS index in the chosen school), the stronger is the probability to have moved to a private school rather than to a state school outside the CA of residence.

As the choice of private schools mainly regard Italian parents, it is unsurprising to note that parents opting for private education end up in schools where the share of foreign students is significantly lower than in the local state one.

On the other hand, the improvements in the schools' performance in Invalsi tests are stronger for those who move within the state system rather than to private schooling as shown by a negative coefficient. It must also be noted that local state schools of those opting for private schooling perform on average already better than the city average (64.1 to 62.6 mean points).

Parents choosing private schools seem to opt to increase the socio-economic level of their children's school peers without a seemingly large growth in the average performances of the selected schools. This could suggest a preference of specific socio-economic compositions of schools' student-body. Indeed, a larger gap in terms of socio-economic homogeneity is more noticeable among those who select private schools. However, it should also be stressed that this outcome may also represent an unwanted effect of the lack of information on schools' performances in terms of learning achievements. This can lead parents to misinterpret high socio-economic status of schools (guaranteed by private schools) with high learning performances.

## **8. The polarization within the private system**

The picture emerged points to a private school system mainly chosen by parents with better than average socio-economic backgrounds. In comparison to state schools parents opted out from, a better socio-economic composition of their student-body is the main distinctive mark of private schools. However, the private school system in Milan is not limited to the upper classes but also attracts a considerable presence of middle-class families (as shown in section 6). This leads to an interesting question: how are students with higher and more average backgrounds distributed within the private system?

We know that a certain level of socio-economic concentration is present in the Milanese state education system (Cordini et al., 2019). Is the same dynamic replicated also in the private system? On the one hand, the selection effect due to presence of fees could produce a sort of threshold effect beyond which the social mix is considered acceptable by upper class families because they essentially mix with the middle class. However, the diversification of fees could reproduce selection mechanisms also between private schools as some middle-class families may be able to afford only some of them.

As mentioned, 61% of students enrolled in Milanese private schools belong to the fourth or fifth quintile of the distribution of the ESCS scores. Out of 64 private schools with available data, a fourth (15 schools) shows a share of students with high socio-economic backgrounds exceeding 80%. About a third (22 schools) show an incidence of over 70% of students with high profiles. On the other hand, 23 private schools register a quota over 50% (against an average of 33% for these profiles) of students coming from medium-low backgrounds.

Therefore, there is evidence of a certain tendency towards polarization also within the private system. If in state schools it is a polarization between highs and lows, in the private system it is essentially between high and middle classes.

Indeed, dissimilarity indexes calculated among private schools are at similar level of those computed on the distribution of pupils between state schools. Dissimilarity index measures the evenness with which two groups are distributed across units (in our case the schools) within a geographical area (Milan in this case). Comparing the distribution of students with medium-high backgrounds (fourth and fifth quintiles) and medium-low (second and third quintiles) by private school, it emerges that 46.4% of pupils should move to other schools to ensure that the distribution of socio-economic backgrounds by school reflects that present in the Milanese private schooling system overall (table 4). If we compare the distributions of the very upper-class students (quintile 5) with those of students with intermediate backgrounds (quintiles 2-3), the quota of students who would have to move to achieve an equal distribution further rises to 54.4%.

*Table 4 – Dissimilarity indexes on distribution of primary school students by socio-economic background (ESCS index).*

	Private schools	State schools
Quintile 5 vs Quintile 2-3	54,4	53,4
Quintile 4-5 vs Quintile 2-3	46,4	44,2

*Source: our elaborations on Invalsi 2018/19 data*

Finally, we measure levels of polarization within schools by calculating for each school the difference between the quota of students with higher backgrounds (represented by fourth and fifth quintile of the ESCS distribution) and the share of lower-middle class students (belonging to the second and third quintile). If the pupils from different backgrounds were evenly distributed between schools, we would expect such difference would being 28 points (the gap between 61% of private schools' students classified in ESCS quintiles 4-5 and the 33% belonging to quintiles 2-3<sup>7</sup>). However, such gap is on average 45%. Therefore, the "high" class is effectively separated from the families with intermediate backgrounds that accesses private schooling. The levels of homogeneity are not fully explained by the selection effect exerted by private schools towards higher backgrounds.

<sup>7</sup> The distribution by quintiles is calculated on the whole school student population. See table 2.

## 9. Conclusion

By analyzing the case of Milan, this paper shed some lights on the dynamics related to the choice of private schooling in an institutional setting in which school choices are not constrained by catchment areas in the public system. This analysis confirms that private education is strongly linked to socio-economic status. However, the analysis of the backgrounds of families choosing private schools in Milan shows that access to them is not limited to the elite but it is also widespread to a considerable section of the middle class.

In this scenario, the strength and costs of the private education system contributes to increase the levels of segregation of the education system.

On one hand, private schools deprive the state system of a substantial share (20%) of almost entirely Italian families belonging to medium to high socio-economic levels. This evidently contributes to increasing the concentration of students with foreign and lower socio-economic backgrounds in state schools.

On the other hand, within the private schools, the distribution of “elite” belonging to highest socio-economic profiles and the noticeable significant proportion of families from intermediate positions is not uniform. Possibly led by the level of fees to be paid, within the private system, a sort of internal polarization emerges with families with higher socio-economic levels who do not choose the same schools of the substantial socio-economically intermediate minority also present in the private system. The different socio-economic groups do not entirely mix but tend to choose different specific private schools. This increases the situations of homogeneity within the school system: socio-economic homogeneity is added to ethnic one (due to the share of foreign students attending private schools being less than 5%).

Summing up, the socio-economic component emerges as the clear distinguishing point of private schooling in Milan. Their performances, on average higher than those of state schools, are not particularly linked to the choice of private schools once accounted for the different socio-economic composition of schools’ student-bodies. Compared to families moving within the state system, parents choosing private schools seem to be attracted by more homogenous schools with higher socio-economic student populations and fewer foreign pupils but not necessarily with highest increase in terms of performances in standardized tests.

Literature has shown that private schooling can be used also as an avoidance (of local state schools) strategy in mixed territories (Ball and Vincent, 2007). However, this doesn’t seem the main pattern in Milan as it is a situation limited to some specific areas of the city with the presence of low fees private schools in the neighborhood.



Another point raised by the literature that does not seem to be corroborated in Milanese case is that private schools may act as a driver to improve the effectiveness and the performances of the state schools they are competing against. In a scenario where socio-economic variables emerge as the main pull effects, the presence of a strong private supply wouldn't positively affect the state education system in terms of being driven to perform better, because the composition of student-bodies influences the choice as much as or even more than performance in learning tests. Therefore, higher performing state schools are not necessarily considered by a significant part of parents opting for private schooling.

Instead, the main outcome of the present dynamics related to the choice of private schooling is to create socially homogeneous environments where a considerable number of students from the very beginning of their education careers relate only to other pupils with similar socio-economic backgrounds even if on paper the education system is designed to be comprehensive at this stage.

Further investigations would be needed regarding the reasons leading to these choices. The analysis presented here is based on the characteristics of those who choose private schools and of the chosen schools. It does not investigate the actual reasons behind the choices made. A further element to take into consideration is that the preference for environments characterized by certain socio-economic levels may not be necessarily linked to considerations on the classmates but also on the parents with which families would interact and share their "scholastic" experience.

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