### UNIVERSITÀ CATTOLICA DEL SACRO CUORE **Dipartimento di Economia e Finanza**

#### **Working Paper Series**

Should you Meet The Parents? The impact of information on non-test score attributes on school choice

Elisa Facchetti, Lorenzo Neri, Marco Ovidi

Working Paper n. 113

December 2021



## Should you Meet The Parents? The impact of information on non-test score attributes on school choice

#### Elisa Facchetti

Queen Mary University of London

#### Lorenzo Neri

University of St Andrews

#### **Marco Ovidi**

Università Cattolica del Sacro Cuore

Working Paper n. 113
December 2021

Dipartimento di Economia e Finanza Università Cattolica del Sacro Cuore Largo Gemelli 1 - 20123 Milano – Italy tel: +39.02.7234.2976 - fax: +39.02.7234.2781 e-mail: dip.economiaefinanza@unicatt.it

The Working Paper Series promotes the circulation of research results produced by the members and affiliates of the Dipartimento di Economia e Finanza, with the aim of encouraging their dissemination and discussion. Results may be in a preliminary or advanced stage. The Dipartimento di Economia e Finanza is part of the Dipartimenti e Istituti di Scienze Economiche (DISCE) of the Università Cattolica del Sacro Cuore.

# Should you Meet The Parents? The impact of information on non-test score attributes on school choice\*

Elisa Facchetti\*, Lorenzo Neri<sup>†</sup>, and Marco Ovidi<sup>§</sup>

\*Queen Mary University of London †University of St Andrews §Università Cattolica del Sacro Cuore

December 9, 2021

#### **Abstract**

We study whether parents value non-test score attributes when choosing school. We exploit an intervention designed to provide hard-to-find information about school environment and day-to-day life at local public-sector institutions. School choice in London provides a unique setting where information on academic performance is already diffused and not shifted by the programme we study. Difference-in-differences estimates show the treatment increased enrolment in state-funded schools with respect to private institutions. We uniquely document that the information particularly affected choices of students with high socio-economic status. In addition, the programme has spillover effects on school choice of unexposed parents. Survey data and text analysis of meeting minutes support the interpretation of our results as effects of information on hard-to-find non-test score school attributes. Our results imply that relatively simple interventions may increase state schools' financial resources and the quality of the student intake.

JEL Classification: I24, I28, H75

Keywords: School choice, Non-test score school attributes, Information intervention

<sup>\*</sup>Special thanks go to Erich Battistin, Francesca Cornaglia, Francesco Fasani, Marco Manacorda and Anna Raute for their invaluable support and guidance throughout the project. We would like to thank Nikhil Agarwal, Peter Blair, Lindsey Macmillan, Imran Rasul, and seminar participants at Queen Mary University of London and University of St Andrews, as well as conference participants at the SMYE 2021, IFO Conference on Genes, Social Mobility, and Inequalities across the Life-Course, EALE 2021 and AIEL 2021 for many helpful comments and discussions.

#### 1 Introduction

Past decades have witnessed a rapid and large expansion of school choice policies (Musset, 2012). School choice is typically viewed as a 'market-based' approach that, by aligning school incentives with parental preferences, can raise school quality and ultimately student achievement through competition (Hoxby, 2003). However, a growing literature suggests that parental preferences are not systematically related to schools' causal impact on test scores (see MacLeod and Urquiola, 2019, for a review), questioning what attributes parents value the most in their choices.

The question on the extent to which observed choices reflect parental preferences rather than available information remains open. Information and marketing interventions in education settings have been shown to shift individual choices (Lavecchia et al., 2016) and have important effects on equilibrium levels of school quality (Andrabi et al., 2017). However, existing studies focus on information about school value-added or absolute performance (Hastings and Weinstein, 2008; Hastings et al., 2016; Allende et al., 2019; Ainsworth et al., 2020). Despite the relevance of non-test score dimensions of school quality for students' long-term outcomes (Jackson, 2018; Beuermann and Jackson, 2020; Beuermann et al., 2019), to the best of our knowledge, no study investigates the provision of information on attributes other than school performance indicators based on academic achievement.

We study whether parents react to the provision of hard-to-find information on non-test score school attributes by changing their enrolment choices. We exploit an intervention targeting perspective secondary school parents and students in a context where information on school academic quality is already widespread. The programme, called "Meet The Parents" (hereafter, MTP), involves the organisation of primary-school-level meetings between primary and secondary school parents and students. Kicked off in 2012 in the London Borough of Camden, its main goal was to address the outflow of local students to the private education sector. School choice within the public sector is well-established in England, where School Performance Tables informing parents on standardised test scores and value-added indicators for each state-funded institution are published every year. Discussion at MTP meetings involves school attributes concerning the day-to-day school life, such as school values and environment,

<sup>&</sup>lt;sup>1</sup>Examples of school choice policies are vouchers reducing tuitions at private schools (Epple et al., 2017), promotion of alternative state school models (e.g. charter schools in the US or academies in the UK) or 'open enrolment' programmes, whereby households can apply to any state school and are assigned based on preference. Introduced in the 1980's open enrolment in England allow parents rank up to 6 preferred schools at application.

discipline policy, safety, and inclusiveness.

We analyse 88 MTP meetings organised from 2012 to 2018, involving 29 different primary schools mostly located in the London borough of Camden. We link data on MTP meetings to individual-level administrative records on the universe of pupils in state-funded education. Participating primary schools stand out in terms of student academic achievement and socioeconomic composition, consistently with the aim of targeting parents likely to consider private education. Local secondary schools presented at the meetings tend instead to be underperforming compared to other state-funded schools in the same market.

We evaluate the impacts of MTP through a difference-in-differences design. Our research design compares changes in secondary enrolment outcomes between students in primary schools where an MTP meeting is organised (treatment) and those enrolled in schools that do not participate to MTP (control) before and after the start of the initiative. The control group consists of peers enrolled in unexposed schools in Camden or bordering districts, who arguably face the same secondary school market. As admission depends on distance to school, we further exploit granular data on children location to control for the local area of residence. The identifying assumption is that, absent MTP, changes in school choice behaviour of students residing in the same area would have been similar in treated and control schools. We show that enrolment outcomes of treated and control students follow a similar trend up to MTP start.

We find that MTP increases the probability of enrolling at a state-funded rather than private secondary school. We estimate a 2.4 percentage points effect (2.8%), corresponding to 1 more student per school-year opting for the public sector and to a 24% reduction of the outflow to private education. Among state-funded schools, parents select institutions with similar attributes to those that can be found in private schools – i.e., those with high academic performance, offering single-sex education, or enjoying relatively high degrees of autonomy. We also find that increased enrolment come from parents residing closer to promoted schools, suggesting they trade-off residential distance with school attributes learnt at the meetings.

Treatment effects are driven by parents with high socio-economic status and high-ability students. This is consistent with the intervention's target and implies a positive effect on peer quality at state-funded schools. Moreover, parents belonging to groups likely less rooted in the local community – ethnic or linguistic minorities, families who recently moved – exhibit larger effects. As they have arguably had less chance to learn about local schools, this result supports the interpretation of MTP as an information treatment.

We also document spatial spillover effects of MTP. We find that untreated parents residing in areas with a larger share of exposed peers are more likely to enrol at schools represented at the meetings.<sup>2</sup> Moreover, by estimating indirect effects of area-level exposure on treated parents, we show that enrolment effects are constrained by peer competition for school seats.

Using survey data and text analysis of meetings' minutes, we interpret MTP effects as evidence that parents respond to hard-to-find information on non-test score school attributes. About 40% of parents reported MTP among the information sources they most rely on for school choice, twice more than School Performance Tables, and about 90% of respondents reported changing their mind after the meeting. Parents reported placing a high value on non-test score attributes, such as school atmosphere or inclusive ethos, which represent the main focus of MTP. Consistently, text analysis reveals that the discussion during MTP meetings overwhelmingly focused on school atmosphere and environment rather than school performance.

Our findings contribute to the literature on the effect of information on school choice, which so far has been focusing on low-SES households and children (Hastings and Weinstein, 2008; Hastings et al., 2015) and on the provision of 'hard' metrics of school performance (Jensen, 2010; Kessel and Olme, 2017; Allende et al., 2019). We focus on a policy that target medium-to high-SES households and a context where information on school performance is widely diffused, and show that parents value hard-to-find information on non-test score school attributes over and beyond school performance.

Related studies investigate parental preference for schools. Parents respond to different school attributes, such as peer quality, socio-economic composition, proximity to residence, and student long-term outcomes (Hastings et al., 2010; Burgess et al., 2015; Glazerman and Dotter, 2017; Beuermann et al., 2019; Beuermann and Jackson, 2020; Abdulkadiroglu et al., 2020). Our results suggest that parents also value additional non-test score dimensions, such as school values, environment and welcoming atmosphere. Our results highlight that parental choices - on which the effectiveness of school choice policies hinges - are not necessarily well-informed on such dimensions.

Our results have important policy implications, since the outflow of children towards private education may substantially affect state school students and increase educational inequality. State school funding is largely based on enrolment count, implying that any outflow from the state sector drives a decrease in school resources. This can have detrimental effects on students

<sup>&</sup>lt;sup>2</sup>This result is in line with large spillovers of information on children attendance and effort on control students within the classroom Bettinger et al. (2021)

remaining in the public sector, especially those from disadvantaged contexts (Jackson et al., 2016; Gibbons et al., 2017). We estimate a net increase in financial resources of £318,945 for the public school sector over the 5 years of the program. Composition of the student body may affect educational outcomes over and beyond a resource effect (through, e.g., peer effects, increased teacher effort, parental participation, or schools' ability to raise additional resources), and this effect is empirically sizeable (Altonji et al., 2015). As students opting for private education are likely to have more advantaged backgrounds, MTP may benefit less-privileged students by increasing peer quality in the public sector. Overall, our findings imply that simple and relatively cheap interventions targeting prospective parents may weaken concerns about adverse effects of school choice on educational stratification and inequality (Hsieh and Urqiuola, 2006; Laverde, 2020).

#### 2 Background and data

#### 2.1 The Education System and School Choice in London

State primary education in England is organised in two phases, Key Stage 1 (KS1) and Key Stage 2 (KS2). In the final year of KS2 (age 11) students sit national standardized tests (SATs) in math and English. Secondary school lasts five years, at the end of which students sit the General Certificate of Secondary Education (GCSEs) exams, concluding compulsory education.

About 90% of primary school-age children are enrolled in state tuition-free schools (DfE, 2016). The majority of students in the public sector attend 'community' schools, fully controlled and funded by the school districts (local authorities, hereafter, LAs).<sup>3</sup> Other most common state-funded institutions are faith schools, which enjoy some degree of autonomy from the LA (e.g., on admission criteria). Finally, foundation schools and academies enjoy the greatest degree of independence from the LA. The latter, similar to US charter schools, are not bound by the National Curriculum and have considerable autonomy in management.

Every year, the Department for Education (DfE) publishes School Performance Tables to report the exam results of children in primary and secondary schools. These include information on standardised test scores and value-added measures for each state-funded school and are used to form school rankings. Student performance in the test, however, cannot be used by

<sup>&</sup>lt;sup>3</sup>LAs provide public services in the local area such as education, policing, and social care. London includes 33 LAs.

state secondary schools as an admission criterion.<sup>4</sup> Admission to both primary and secondary state schools is largely based on home-school distance.<sup>5</sup> Primary schools are small, enrolling on average 55 students per cohort, and seats are typically rationed. This implies very narrow catchment areas, with an average of less than 1 kilometre home-school distance in London. Secondary schools, on the other hand, are three times bigger - the average grade enrolment is 165 - and enrol students located 1.4 kilometre from school on average.

Private, often called 'independent' schools, are not bound by the national curriculum. They are generally organised in three phases: pre-preparatory (age 4 to 7), preparatory (age 8 to 11 or 13), and senior (age 11 or 13 to 18). Independent schools enjoy substantial freedom in terms of the subjects they teach and other educational practices. They typically feature smaller class size, high-quality facilities, and above-average academic performance (e.g. Independent Schools Council, 2019). Importantly, as private schools do not participate in the public centralised assignment mechanism, they do not admit students based on distance to school but may select them based on ability or other criteria.

#### 2.2 The Meet The Parents Project

MTP was launched in 2012 by a group of parents concerned about the transition from primary to secondary school for the local community. In the London borough of Camden, the area where the project started, a substantial share of parents enrol their children outside the local state sector at the end of primary education. Before the intervention, on average, 10% of students opted for private education after attending a state primary school in Camden while around 25% enrolled in state schools in other districts (the corresponding figures for London are 9% and 17%, respectively).<sup>6</sup>

A stated concern that spurred the MTP initiative was that the outflow of students, typically involving children from more advantaged socio-economic backgrounds, could potentially have negative effects on local secondary schools, students, and communities. First, as school funding is mainly based on enrolment counts, it weakens financial stability and expenditure at state-funded schools. Lack of resources may especially harm disadvantaged students (Jackson

<sup>&</sup>lt;sup>4</sup>Grammar schools, the only exception to this rule, are virtually absent in our context. Other schools may prioritise applicants based on other criteria (e.g. faith schools typically admit based on religion).

<sup>&</sup>lt;sup>5</sup>At the end of primary school, parents can express their preferences for up to 6 schools. In London, about 70% of parents obtain the first-choice secondary school and about 90% obtain one of their top 3 choices.

<sup>&</sup>lt;sup>6</sup>One potential explanation for the private school enrolment rate is that Camden residents have relatively high income (see public aggregate data).

et al., 2016). Additionally, the outflow of well-supported pupils worsens the socio-economic composition of local secondary schools. As a result, the efficiency of school allocation may worsen with non-linear peer effects, i.e., if disadvantaged pupils benefit from proximity with well-supported peers without harming the latter's achievement (Carrell et al., 2009; Bertoni et al., 2020a).

MTP consists of primary-school-level meetings where parents and children from local secondary school talk to primary school peers about their school choice and experience. Events are typically one-hour long and involve a panel discussion and questions, guided by a moderator (see Figures A.1 and A.2). On average, meetings are attended by panellists from 4 different secondary schools. The typical participating secondary school is present at 1 or 2 different meetings per year, with substantial variation (up to 5). Meetings are scheduled at the beginning of the academic year, a few weeks before last-grade parents apply for secondary school. The average event is attended by about 17 primary school parents, mostly with children in the two final grades, forming about 40% of the average cohort size.<sup>7</sup>

Each meeting follows a standardised outline. In the first part, panellists are asked the following questions: (i) why did you choose your secondary school; (ii) what do you like about your school; (iii) what would you change. The second part is open to discussion. Panellists typically focus on day-to-day school life, the reasons for choosing their school, and the overall assessment of their decision, without mentioning school performance indicators. Events are aimed at providing a honest assessment of local secondary schools from 'insiders' with no advertising intent (school leaders are not invited). In this sense, MTP aims at filling 'a gap between slick open days and playground rumours'.<sup>8</sup>

Overall, MTP purposely focuses on qualitative dimensions of the schooling experience, which are typically more difficult for parents to acquire. Parents are likely already informed on peer quality indicators such as test scores, since School Performance Tables are easily accessible and highly publicised by schools. MTP provides therefore the ideal setting to study the provision of information on non-test score attributes, holding constant the information on school performance.

<sup>&</sup>lt;sup>7</sup>Data on parental participation are available for 67% of meetings. We impute parental participation in missing years using school-level average at schools with consistent availability of data, increasing coverage to 83% of the events.

<sup>&</sup>lt;sup>8</sup>See the MTP website for details and further material.

<sup>&</sup>lt;sup>9</sup>Existing evidence shows that parents strongly respond to peer quality indicators before the start of MTP (see, e.g., Burgess et al., 2015).

#### 2.3 Data and Descriptive Statistics

We exploit the National Pupil Database (NPD), including administrative records on the population of students in primary and secondary state-funded schools from 2006 to 2019. We track residence at the census block level, and individual school enrolment throughout compulsory education. We observe background characteristics (gender, ethnicity, language spoken at home, eligibility for subsidised lunches, and special education needs), teacher assessments at the end of the first phase of primary school (Key Stage 1 scores, age 7), and test scores in math and language from national standardised tests at the end of primary school (Key Stage 2 scores, age 11). 11

Students attending private schools are not recorded in the NPD. We code a Year 6 student as enrolling into a private institution if not tracked in the dataset one year later. Hence, enrolment at private school is defined as a residual case. Using this proxy, we estimate that every year about 10% of students enrol into a private secondary school on average. 13

We complement administrative data with records on MTP meetings provided by the organisers. We gathered data on the time, location, secondary schools represented, and number of participants for each event. In 2019, we further administered a survey to participating parents collecting their child's grade, their characteristics (following the same coding as in the NPD), and the type of schools they were considering. We also asked about the sources of information parents use, the school features they value the most, and how MTP changed their choice (see Figures A.3 and A.4). This was added to less detailed surveys administered by the MTP organisers in the years before 2019.

MTP was launched in 2012 and progressively rolled out, as shown in Figure 1. Initially

<sup>&</sup>lt;sup>10</sup>The census blocks used in our analysis are Lower Layer Super Output Areas (LSOAs). These geographical units were created by the Office for National Statistics (ONS) for census reporting purposes, and contain 800 households on average, which correspond to around 1/3 of the size of a US census block.

<sup>&</sup>lt;sup>11</sup>In addition, the NPD is matched to administrative data on centralised assignment to school, including the list of preferred institutions for each student and the school offered as a result of the assignment. We use the latter to proxy school capacity and obtain over-subscription indicators. Since preference data are available from 2014 only, and exploiting records on pre-programme periods is crucial in our research design, we consider enrolment rather than school preferences as the main outcome in our analysis.

<sup>&</sup>lt;sup>12</sup>Other reasons that would justify the disappearance from the dataset could be, e.g., that a student leaves the country or is taken out of school for medical reasons. Note that grade retention would not imply the disappearance from the dataset, as we would observe the student repeating the same school grade one year later. Any measurement error in private school enrolment is unlikely to be affected by MTP and is then controlled for in our difference-in-differences empirical strategy.

<sup>&</sup>lt;sup>13</sup>This figure is consistent with the official statistics on pupils count, which report that 8% of students attend private secondary schools in England (breakdown by areas is not available).

<sup>&</sup>lt;sup>14</sup>MTP participants cannot be individually linked to administrative data.

run in one pilot school, the programme was extended to include up to 20 primary schools per year (Panel A). Schools, contacted in advance about hosting an MTP event, potentially enter or exit the initiative each year. The participation decision potentially depends on many variables such as the interest of parents or school leaders about secondary school choice. However, there are no monetary incentives for primary schools to select into MTP based on its impact on local secondary enrolment. We deal with potential systematic differences between treated and control schools in our research design, as detailed in Section 4.

The initiative is concentrated in the borough of Camden. As shown in Figure A.7, most participating primary schools are in Camden, adding up to about 50% of primary institutions in the LA.<sup>17</sup> Half of the 24 promoted secondary schools are in Camden, corresponding to 80% of the local secondary schools (16 out 20). Other participating secondary schools are located in bordering LAs, consistently with the larger size of their catchment areas.

Panel A of Table 1 shows descriptive statistics for primary schools in our treatment (column 1) and control (columns 2 and 3) groups. Primary schools organising MTP events enrol students from relatively advantaged backgrounds. With respect to other schools in Camden, participating schools serve students that are less likely to be eligible for subsidised lunch (34% versus 47%). The difference is even more striking when considering white origin and whether English is the native language (51% and 60% versus 33% and 43%, respectively). Students in participating primary schools also have substantially better achievement compared to peers in Camden, scoring well above the London average in mathematics and English at KS2. Finally, primary schools organising MTP events are in higher demand by parents as the average distance to school is lower and enrolment count higher than other local institutions.

On the other hand, secondary schools participating at the meetings display lower academic performance than other institutions in the area. Final year test scores in mathematics and English are 0.12 and 0.08 standard deviations (hereafter,  $\sigma$ ) lower than non-participating schools, as can be seen in Panel B of Table 1. They also serve a more disadvantaged intake, with a 6 percentage points higher share of students eligible for free lunch. Overall, descriptive statistics are in line with the concerns of dissipating the investment in excellent primary schools that

<sup>&</sup>lt;sup>15</sup>Participation to MTP does not pose substantial costs on primary schools, as it essentially involves reserving a room for the meeting and spreading the word among parents.

<sup>&</sup>lt;sup>16</sup>Still, 10 out of 29 participating schools exit the initiative at some point in time (see Figure A.6). To alleviate concerns about selective exit, in Appendix B we show that Intention-to-Treat estimates are substantially unchanged.

<sup>&</sup>lt;sup>17</sup>Not far from the border with Camden, two participating schools are located in the borough of Islington, and three in the borough of Haringey.

#### 3 Interpreting the Effect of MTP on School Choice

We present here a stylised framework to outline how we interpret the effect of MTP on school choice. Several studies conclude that parents respond to peer quality indicators such as test scores (Hastings and Weinstein, 2008; Burgess et al., 2015; Abdulkadiroglu et al., 2020; Ainsworth et al., 2020). Non-test score school attributes may also play a role. For instance, Burgess et al. (2009) show that a "general good impression" of the school is the most frequently cited reason for choosing schools beside geographical proximity. Consistent with this view, Beuermann et al. (2019) and Beuermann and Jackson (2020) find that parents value school effectiveness on an array of long-run socio-economic outcomes, often uncorrelated with school impact on test scores. To assess such impacts, parents may look beyond measurable school characteristics.

Borrowing from Hastings et al. (2010), we describe school choice as a utility maximisation problem. Parent i chooses the secondary school j that maximises her utility function  $(U_{ij})$  subject to a feasibility constraint. We describe preferences for schools as:

$$U_{ij} = \beta_i^q Q_j + X_j' \beta_i^x + \beta_i^e E_j - C_{g(j)} + v_{ij},$$
(1)

where  $v_{ij}$  is an idiosyncratic component. Measurable attributes are  $Q_j$ , denoting school academic performance, and  $X_j$ , summarising other characteristics such as peer socio-economic composition and distance from residence. The index  $E_j$  summarises a bundle of non-test score characteristics we label "school environment", on which information are hard to find. This includes attributes such as the discipline policy enforced in a school, school safety, food quality, or school atmosphere. Finally, private schools charge tuition fees that enter parental utility as a pecuniary cost,  $C_{g(j)}$ , where g(j) indicates schools j's state or private sector and C=0 at state-funded schools.

Parents enrol their children at the highest-utility school that is available. Formally, the chosen institution j is such that  $U_{ij} > U_{ik} \forall k \in J_i$ , where  $J_i$  is the set of schools that parent i can access based on parental demand and admission criteria. The choice set  $J_i$  is the combination

of state-funded and private schools accessible to parent i:

$$J_i = J_i^{state} \cup J_i^{private}$$
.

Even if applying for a place is always possible, parents may not have *de facto* access to some schools because of admission criteria or other entry barriers. For example, tuition fees must be paid to enrol in private institutions, and admission to state schools is prioritised by distance, penalising parents who cannot afford residence close to popular schools. We assume that each parent considers the full set of schools available to them and that  $J_i$  is fixed at the time of the intervention. MTP meetings, indeed, are organised close to the application deadline, when residential choice is likely fixed.

Following Hastings et al. (2010), we interpret  $\beta$ 's in equation (1) as the weights parents assign to each school attribute. These may reflect either genuine parental preference or the stock of available information on a particular trait. Intuitively, parents will not be able to properly account for a certain attribute when choosing a school if they have very limited information about it, regardless of their taste. Therefore, weak preference and lack of information for a school trait are observationally equivalent when analysing school choice. To visualise this distinction, for a generic school attribute a, parental weight can be written as:

$$\beta_i^a = \delta_i^a * \tau_i^a, \tag{2}$$

where  $\delta_i^a$  reflects parent *i*'s taste for attribute *a*, while  $\tau_i^a$  represents the extent to which the parent is informed on *a*.

In this setting, we interpret the effect of MTP as providing hard-to-find information on nontest score attributes, represented by  $E_j$  in equation (1). The intervention enables parents to learn about the environment at local state secondary schools through interactions with peers attending such institutions. Information on academic performance and other measurable attributes, instead, are already public and salient and parents, especially the relatively advantaged families targeted by MTP, are likely already aware of their distributions across local schools.<sup>18</sup> In addition, information on school performance or composition are never discussed at the meetings. At the same time, MTP cannot shift preferences over other important attributes such as distance

<sup>&</sup>lt;sup>18</sup>School Performance Tables provide information on school performance ( $Q_j$  in Equation 1), and a number of intake characteristics as a share of the total roll: pupils with a special educational need, gender, pupils whose first language is not English, pupils eligible for subsidised lunches ( $X_j$  in Equation 1).

to school. Therefore, we view its effect as working through increased information on school environment, holding other attributes valued by parents constant.

In conclusion, the potential impact of MTP on school choice would suggest that parents value non-test score school attributes, as they react when provided such information. Parental utility described by Equation (1) can significantly change as a result of the intervention only if parents also have a genuine preference for  $E_j$ . Otherwise, the information shock provided by MTP would hardly shift parental utility enough to change their school choice.

#### 4 Empirical Strategy

In this section, we present our empirical strategy, guided by the conceptual framework discussed in Section 3. Our goal is to estimate the causal treatment effect of MTP on parental enrolment choices. This raises important identification challenges as one needs to estimate a counterfactual which describes how the outcome would have changed absent the treatment. For this purpose, we design a difference-in-differences (DD) strategy that exploits variation in participation to MTP meetings across schools and over time.

Our control group is formed by all students attending a primary school that never participated to MTP, and that is located in Camden or one of the bordering LAs. This choice is motivated by the fact that control schools operate in the same local market as treated schools. Despite displaying some differences in characteristics such as test scores and student composition (see Table 1), control schools are likely to be exposed to similar changes in the local education system, and, therefore, to have similar trends in terms of enrolment outcomes. This selection yields 224,637 control students, either completing primary education before MTP started or enrolled in one of the 328 control schools (Table A.1).<sup>20</sup>

To internalise plausible spillovers, we define all students in a school-cohort with an MTP meeting as treated.<sup>21</sup> This choice is backed by survey evidence, as virtually all participating parents (97%) state that they plan to discuss the meeting's content with their peers. The implicit assumption is that information gathered through MTP spreads within a school-grade.<sup>22</sup>This

<sup>&</sup>lt;sup>19</sup>93% of students enrolling in MTP-promoted secondary schools attended primary school in Camden or bordering LAs.

<sup>&</sup>lt;sup>20</sup>We test the robustness of our choice by considering alternative control groups as detailed in Appendix B.

<sup>&</sup>lt;sup>21</sup>We consider as exposed students in grades 5 and 6. As MTP meetings are mainly addressed to students in final grades, these account for about 90% of the participants (Figure 3).

<sup>&</sup>lt;sup>22</sup>Conducting an informational experiment on student behaviour, Bettinger et al. (2021) find large spillovers within classrooms, similar to treatment effects for directly-exposed students. We would expect similar spillovers

criterion yields 3,990 students in our treatment group (Table A.1).

We estimate a two-way fixed effects model (TWFE):

$$Y_{islt} = \alpha_0 + \alpha_1 MTP_{st} + X'_{islt} \gamma + W'_{st} \delta + \phi_s + \phi_l + \phi_t + e_{islt}$$
(3)

where  $Y_{islt}$  is the outcome for pupil i enrolled in the last grades of primary school s in year t, and residing in local area l. <sup>23</sup> Our main outcomes of interest are sector and characteristics of the secondary school where a student enrols.  $MTP_{st}$  is the treatment indicator, equal to 1 for schools organising an MTP meeting in year t.  $X_{islt}$  and  $W_{st}$  are, respectively, vectors of individual and school time-varying controls. The inclusion of school and year fixed effects, respectively  $\phi_s$  and  $\phi_t$ , isolates DD variation in our treatment variable. In particular,  $\phi_s$  controls for any unobserved attribute at the school level that may affect enrolment, such as correlated choices among schoolmates or the presence of a particularly motivated head-teacher in engaging with parental choice. We additionally include local area fixed effects  $(\phi_l)$ , controlling for unobserved effects of student residence on school enrolment. This is important in our context as residential sorting impacts the choice set of available state-funded schools. We cluster standard errors at the school level to account for correlation in the treatment status.

 $\alpha_1$  in equation (3) identifies the effect of MTP on school enrolment under the assumption that, absent MTP, treated and control students would have followed similar trends in secondary enrolment decisions. Figure A.5 plots trends of our main enrolment outcomes separately for treatment and control group, showing that they are roughly parallel up to the introduction of MTP. As expected, treated students are systematically more likely to choose a private secondary institution. Despite enrolment outcomes being hardly comparable in levels, we view parallel trends assumption as plausible since treated and control students face the same secondary school market.

A recent econometric literature highlighted several issues with TWFE estimators under variation in treatment timing and heterogeneous treatment effects (Borusyak and Jaravel, 2021; Goodman-Bacon, 2021; De Chaisemartin and d'Haultfoeuille, 2020; Callaway and Sant'Anna, 2021; Sun and Abraham, 2021; Baker et al., 2021). In our context, possibly different schools enter treatment in different years, and we cannot rule out some degree of treatment effect het-

as the typical primary school cohort has just one or two classes.

<sup>&</sup>lt;sup>23</sup>The local areas considered are Lower Layer Super Output Areas (LSOAs), narrowly defined areas spanning about 0.25 square miles and including about 800 households on average.

erogeneity. To assess the sensibility of our estimates, we additionally offer results from a "stacked-by-event" design which pools all possible 2-by-2 DD comparisons in our data and does not suffer from the pitfalls associated with TWFE estimation. We build 'placebo' events for control schools similar to Deshpande and Li (2019). First, we create a separate dataset for each treatment wave.<sup>24</sup> Each dataset includes all students in treated schools that entered MTP in the considered wave, along with never-treated students. Second, we define relative time to event in each dataset with respect to the year where treatment starts in the considered wave. Third, we stack all datasets into one. In this procedure, one student in never-treated schools serves as control at different event times depending on the treatment wave considered. We follow Deshpande and Li (2019), Cengiz et al. (2019) and Fadlon and Nielsen (2019) and estimate:

$$y_{islt} = \sum_{k=-9}^{3} \gamma_k \cdot \mathbb{1}(t=k) + \sum_{k=-9}^{3} \beta_k MTP_s \cdot \mathbb{1}(t=k) + X'_{islt} \gamma_1 + W'_{slt} \delta_1 + \phi_s + \phi_l + \phi_t + e_{islt} \quad (4)$$

where the notation follows the one of equation (3).  $\mathbb{1}(t=k)$  are event-time dummies, equal to 1 if year t is k years from entry into the MTP programme. This procedure allows us to separately identify year and event-time fixed effects, eliminating event time trends that do not appear in calendar time.

The leads in equation (4) can be interpreted as placebo estimates of the MTP effect, indirectly testing the parallel trends assumption in a regression framework. Figure 4 plots the point estimates of  $\beta_k$  before and after the treatment. Estimates of pre-treatment coefficients are close to zero, and statistically not significant for all main outcomes, supporting our identifying assumption. This finding is consistent with the observation that MTP started as a grassroots movement that could hardly be anticipated by parents at the time of enrolment into primary school. We discuss how treatment effects obtained using the TWFE specification in (3) compare to the effects obtained using the "stacked-by-event" specification in (4) in Section 5 below.

#### 5 Results

<sup>&</sup>lt;sup>24</sup>We build four datasets, corresponding to the four treatment waves (see Appendix Figure A.6), excluding the first pilot primary school which started MTP in 2012.

#### 5.1 Choice of school sector and location

Exposure to MTP increases enrolment at state-funded rather than private secondary school. Panel A of Table 2 reports estimates of  $\alpha_1$  in equation (3), where the outcome is an indicator of enrolment at a state-funded secondary school. The raw correlation between MTP exposure and public-sector enrolment is close to zero and not statistically significant (column 1). We progressively include local area and school fixed effects in columns (2) and (3) to isolate the effect attributable to the programme. Parents exposed to MTP are 2.4 percentage points (pp, corresponding to 2.8%) more likely to enrol their pupils into state-funded schools, corresponding to 1 additional student enrolling into state-funded schools per each MTP meeting.<sup>25</sup> Estimates are barely affected when including controls for individual and primary school characteristics (column 4). As covariates provide precision gains, we discuss the latter as our preferred specification in what follows.

We next consider specific sub-group of schools within the public sector. In Panel B, we focus on enrolment at secondary state-funded schools promoted during MTP meetings. Exposure to MTP increases the probability of enrolling to a secondary school represented at the meetings by 1.4 pp, though the estimate is not statistically different from zero. Panels C and D show that increased public-sector enrolment is homogeneously spread across schools in Camden and neighbouring districts (estimates are, however, statistically insignificant). As expected, the sum of the two coefficients corresponds to the overall estimate in Panel A, suggesting that the program has null impact outside the districts we consider.

Post-treatment coefficients plotted in Figure 4 show how the effect of MTP evolves after a school enters the programme. Reported estimates are obtained from the stacked-by-event design in equation (4). Impacts on public-sector enrolment in Panel A are positive and significant up to three years after the beginning of the treatment, and are overall consistent with average TWFE estimates in Panel A of Table 2. Similarly, Panels B-D in Figure 4 are consistent with corresponding average estimates in Table 2.<sup>27</sup> These results suggest that TWFE estimates provide similar findings than what would be obtained by an alternative design robust to treatment effect heterogeneity. We present results from the former specification in what follows.

In conclusion, results show that MTP meetings increase enrolment at local state-funded

<sup>&</sup>lt;sup>25</sup>This figure is obtained by applying the estimated coefficient to the average cohort size in last grade of treated schools (about 40 students).

<sup>&</sup>lt;sup>26</sup>We consider here any secondary school participating to at least one MTP meeting over our sample period.

<sup>&</sup>lt;sup>27</sup>The time dynamics of estimated effects might either reflect heterogeneous impacts across periods or a compositional effect, as we do not observe all participating schools for five consecutive periods.

schools.<sup>28</sup> Our findings are not negligible in magnitude, as they imply a 24% reduction of the primary-school student outflow to private education. Inflow of pupils in the public sector, however, is not necessarily directed towards local institutions discussed at the meetings. Though 4 to 5 secondary schools are represented at a typical meeting, the institution where a pupil enrols is obviously just one. Larger impacts on enrolment are expected at schools with attributes associated to parental demand, as we show in the next subsection.

#### 5.2 Choice among state-funded schools

In this subsection, we dig deeper into the effect of MTP on school choice by considering quality, composition, type, and distance from residence of state-funded secondary schools.

#### **School attributes**

MTP increases enrolment at top-performing state-funded institutions, while leaving enrolment at low-performing schools largely unaffected. We present estimates similar to column (4) of Table 2 where the outcome considered is an indicator of school quality. In columns (1)-(2) of Table 3, we consider final-year test scores and investigate enrolment at schools in the top or bottom quartile of academic performance.<sup>29</sup> Parents exposed to MTP are about 5 pp more likely to enrol at a state-funded school with high academic performance (Panel A), doubling the average result in column (4) of Table 2. Result are similar for MTP-promoted schools (Panel B), suggesting the meetings induce parents to enrol at higher-performing schools among the one presented. Consistently, panels C and D show that the result is entirely driven by local schools, likely reflecting access barriers to high-demanded institutions located further away (see Panel C and D, column 1).<sup>30</sup>

The second index of school quality we consider is popularity, measured by oversubscription. We consider a school oversubscribed if available seats are outnumbered by applicants ranking it as first choice (37% of secondary schools in London).<sup>31</sup> In line with effects by

<sup>&</sup>lt;sup>28</sup>We show in the Appendix that our results survive a series of robustness checks addressing several potential concerns with our estimates.

<sup>&</sup>lt;sup>29</sup>We use Year 11 test scores (GCSEs) in mathematics, standardised to have zero mean and unit variance by year. We measure school academic performance at the time students enter secondary education.

<sup>&</sup>lt;sup>30</sup>Top-performing schools are more likely to be oversubscribed as parents in England are found to reward them with higher demand (Burgess et al., 2015; Burgess et al., 2019).

<sup>&</sup>lt;sup>31</sup>This is a lower bound of over-subscription as applicants excluded from higher-preference schools are in the list for admission as well. We proxy school-year capacity with the number of offers issued. The over-subscription indicator is computed at 2014, the first year where preference data are available.

school performance, results in columns (3) and (4) of Table 3 show that MTP increases enrolment to popular local state-funded schools, including those represented at the meetings, but not elsewhere, likely due to rationing of school seats.

These results imply that our estimates may be a lower bound of the MTP impact on school enrolment as access to oversubscribed schools is rationed. To investigate this hypothesis, we estimate the effect of MTP on preferences submitted at application, a direct measure of parental demand.<sup>32</sup> Although results in Table A.2 should be interpreted with caution, they show increased parental willingness to consider state-funded school.<sup>33</sup> While we find no effect of MTP on parental rankings (columns 1-4), this could simply reflect parents requesting state school seats regardless of their preference for private education as application is free of charge. On the other hand, parents exposed to MTP are about 3 pp less likely to enrol at a private institution upon receiving an offer for an MTP-promoted or any state-funded school (columns 5-7). Results suggest that MTP increases take up of the offered public-sector school with respect to opting out to private education.

We next focus on school type and socio-economic composition. In this analysis, we abstract from geographical location of state-funded schools. First, we look at the effect of MTP by type of state-funded school (Table 4). The effect of MTP is concentrated on state-funded schools other than academies, increasing enrolment at community and voluntary aided schools by 5.2 and 7.1 pp, respectively (columns 1-2).<sup>34</sup> As faith, and particularly Catholic, schools are often among top-performing state-funded institutions (Pasini, 2019), the result is consistent with parents favouring high-performing schools (see Table 3). However, since community schools are on average lower-performing, results suggest that school attributes learnt during meetings are not necessarily correlated with absolute achievement.<sup>35</sup> In addition, MTP has a substantial positive impact on enrolment at single-sex schools (6 pp, column 4). Second, we look at student characteristics of the secondary schools where pupils enrol (Table 5).<sup>36</sup> MTP decreases the

<sup>&</sup>lt;sup>32</sup>The mechanism employed for centralised assignment in London incentivises parents to rank schools in the true order of preference, although preference about non-ranked institutions cannot be inferred from observed rankings (Fack et al., 2019).

<sup>&</sup>lt;sup>33</sup>Since preference data are only available from 2014, in Table A.2 we focus on schools entering the programme from 2015, together with the control group, so that at least one pre-period is available.

<sup>&</sup>lt;sup>34</sup>Community schools are the most frequent secondary school type in Camden or bordering districts (38%), followed by academies and voluntary aided (mostly religious) schools (28% and 26%, respectively). Foundation schools, for which we also find a positive effect, represent just the 7.5% of institutions. As academies have experienced a steep expansion during the period we consider, mainly through conversion of community schools, we define school type at the time a student enters secondary education.

 $<sup>^{35}</sup>$ In our sample, community schools perform slightly below the London average, while the other three types of school (religious, academies and foundation) similarly perform about  $0.5\sigma$  above the mean.

<sup>&</sup>lt;sup>36</sup>We measure school composition in 2009, before the first cohort exposed to MTP begins the final year of KS2

share of students with special needs and white students by about 1 pp on average (columns 1 and 3, respectively).<sup>37</sup>

Overall, our findings suggest that MTP increases enrolment at state-funded schools with specific attributes. Exposed students enrol at high-quality institutions, consistently with robust evidence in the literature (Hastings et al., 2010; Burgess et al., 2015; Glazerman and Dotter, 2017; Abdulkadiroglu et al., 2020), and at single-sex schools, two typical characteristics of private education. However, we also find that exposure to MTP shifts parents towards ethnically mixed and community schools, implying that what parents look for in a school is not simply summarised in academic performance measures. Results suggest that the impact of similar initiatives could possibly be even larger if state-funded schools invested in developing attributes associated with parental demand.

#### Distance to school

Distance to school is a crucial variable in parental choice, especially in our context. Proximity to residence is highly-valued by parents, so much that the literature often measures parental preferences in terms of willingness to travel (see, e.g., Bertoni et al., 2020b). In addition, distance to school determines access to state-funded schools, allowing us to investigate the impact of school feasibility.

We find that MTP significantly increases enrolment at promoted schools for parents located closest to their premises. We build a student-school level dataset by stacking distance of a given pupils to each of the 22 MTP-promoted schools. Figure 6 plots estimated coefficients from specifications similar to equation (3) where treatment is interacted with a series of indicators for 500-meter-wide bands of distance to school. Estimates are plotted along with the 95% confidence interval at the central distance value of each band. Parents exposed to MTP are 4 pp more likely to enrol at a promoted school with respect to control parents residing within 500 meters (Panel A). This estimate is substantially larger than the average result in Table 2, and statistically significant. The effect fades out rapidly with distance, dropping to zero beyond 1 km from the school.

Parents are willing to accept longer travel to school to enrol their children at popular pro-

to hold constant time-varying school characteristics. Results do not change if we instead use contemporaneous outcomes.

<sup>&</sup>lt;sup>37</sup>We also find negative effects on the share of students entitled to subsidised lunch or speaking English at home (columns 2 and 4), although estimates are not statistically significant.

moted institutions. Panel B of Figure 6 focuses on oversubscribed promoted schools (5 out of 22, which explains the drop in precision). These effects are likely constrained by feasibility, as seats are rationed and parents located too far from the school hardly get access. Estimates for closest students are very similar to those in Panel A suggesting that, at relatively short distance to school ( $\leq$  1km), MTP impact does not depend on over-subscription. Nonetheless, the effect on oversubscribed promoted schools persists at farther distances, dropping to zero only after 2.5 km, suggesting higher willingness to travel.

Overall, results suggest parents face a trade-off between proximity and other school attributes they value. When an MTP-promoted schools is available at a short distance, we observe an increase in enrolment regardless over-subscription. Interestingly, the fact that parents located in the vicinity of a school – likely the best informed on its attributes – exhibit largest impacts supports our view that information provided by MTP is hard to find elsewhere.

#### **5.3** Heterogeneous effects

The impact of MTP is concentrated on relatively affluent students. Columns (1) and (2) of Table 6 show that students not eligible for subsidised lunch are 3.6 pp more likely to enter any state-funded school (Panel A), mostly local (Panel C), and about 3 pp more likely to choose a represented secondary school (Panel B). As a further proxy of parental socio-economic status, we estimate MTP effects by local area (LSOA) deprivation, using an index based on average income in the neighbourhood. Figure 5 shows that exposed parents in the lowest deprivation quartile are almost 6 pp more likely to enrol their children at a public-sector school (Panel A) or a promoted secondary school (Panel B). Results for students residing in higher-deprivation areas are smaller and not statistically significant. Consistently, MTP impacts school choice of the highest-performing students. Columns 3 and 4 of Table 6 report estimates by mathematics test scores at the end of primary school. While we detect no effects for students in the bottom quartile, top-performing peers exhibit positive and large effects on enrolment to local state-funded school, especially those promoted at the meetings.

Finally, MTP effects are larger than average for students likely less rooted in the local education system. MTP increases enrolment of Asian students at any state-funded school and at promoted schools by 3.2 and 4.9 pp, respectively (columns 5-6). Larger effects of state-funded

<sup>&</sup>lt;sup>38</sup>Priority over distance is often granted to special categories of applicants such as siblings of current students, students from feeder primary schools, or religious students in case of faith schools.

vis-à-vis private school enrolment are also estimated on students who are not native speakers (columns 7-8) and who have recently moved their residence (columns 9-10).<sup>39</sup> These findings are consistent with the interpretation of MTP as an information treatment, as discussed more in details in Section 6.

Overall, the effect of MTP is highly heterogeneous based on students socio-economic background. The differential effects we find are consistent with the programme's target, composed of relatively advantaged student. We conclude that MTP has not only a quantitative effect on public-sector enrolment, but also a compositional one, increasing peer quality at local state-funded institutions.

#### 5.4 Spillovers

In this section, we investigate spillover effects of MTP by exploiting variation in the share of treated students across neighbourhoods. Geographical proximity to parents exposed to MTP may affect enrolment outcomes via two different channels. First, it could increase parental interest in local secondary schools through the spread of information about promoted institutions. In light of our results, the information channel would positively impact local public-sector enrolment. Second, if a school falls oversubscribed, proximity to treated parents could result in further rationing of seats. The competition channel would negatively impact local public-sector enrolment.

MTP spillover effects depend on the fraction of exposed parents in a local area. Following Autor et al. (2014), we measure the intensity of exposure to treatment as the share of students directly exposed to MTP in a local area:

$$MTPI_l = rac{\sum\limits_{i} MTP_{s(i)} \cdot \mathbb{1}(L_i = l)}{\sum\limits_{i} \mathbb{1}(L_i = l)},$$

where s(i) is the primary school attended by student i, MTP indicates whether school s organised some meeting, and  $L_i$  denotes the census block where i resides in grade 6.

<sup>&</sup>lt;sup>39</sup>We define movers here as pupils whose postcode of residence has changed during years 3 to 6 of primary school. The 25% of students is defined as mover according to this criterion.

We estimate spillover effects through the following specification:

$$y_{islt} = \tau_0 + \tau_1 MTP_s \cdot T_{st} + \tau_2 MTPI_l \cdot T_{st} + \tau_3 MTP_s \cdot MTPI_l \cdot T_{st}$$

$$+ X'_{islt} \gamma_2 + W'_{st} \delta_2 + \phi_s + \phi_l + \phi_t + \varepsilon_{islt}.$$
(5)

In this formulation,  $\tau_1$  estimates the direct effect of MTP on exposed parents in hypothetical areas where no other parent is exposed (Autor et al., 2014). The indirect effect of MTP, captured by exposure intensity MTPI, is allowed to vary by treatment status: the indirect impacts on exposed and unexposed parents are estimated by  $\tau_2$  and  $\tau_3$ , respectively. To interpret our results, we assume that exposed parents are not affected by the spread of information from exposed neighbours. It follows that  $\tau_3$  purely reflects the competition channel of MTP spillover, while  $\tau_2$  captures a combination of the competition and information channels.

Competition for seats at local secondary schools plays a significant role. Estimates from equation (5) are presented in Table 7. Consistently with our hypothesis, estimates of  $\tau_3$  for MTP-promoted schools are negative and statistically significant, implying that enrolment at schools presented during meetings was constrained by competition from other exposed parents (see column 1, Panel B). A one standard deviation higher intensity in local MTP exposure lowers the chance of being enrolled to an MTP-promoted secondary school by 1 pp Columns (2) and (3) show that competition effect is found only at oversubscribed schools, the sole group of schools where it may display. Moreover, consistently with the fact that a seat in one state-funded school is guaranteed by law, the competition effect on enrolment at any public-sector institution (Panel A, column 1) is a precisely estimated zero.

Competition effects imply that the direct impact of MTP on enrolment at promoted schools is larger than net effects. Estimates of  $\tau_1$  in equation (5) is 3.6 pp (Panel B, column 1), larger than the net impact estimated in Panel B of Table 2. On the contrary, the direct impact of MTP on enrolment at any state-funded school is remarkably similar to the net effects (Panel A of Table 7, column 1). Once again, the result is consistent with the absence of competition effect on this outcome.

The spread of information generated by MTP impacted the school choice of unexposed parents living in the proximity of treated peers. Estimates of  $\tau_2$  in Panel B are positive on average, and strongly significant for oversubscribed institutions (see columns 1 and 2, respectively). These results could reflect both channels of MTP spillovers, combining information and com-

petition effect. As the latter are found to be negative, estimates of  $\tau_2$  can be interpreted as a lower bound for the information effect.<sup>40</sup>

We conclude that MTP meetings have significant spillover effects on untreated parents residing at close contact with exposed peers. Results suggest that parents value their peers' opinion in school choice and resort to word-of-mouth to inform their decision. This conclusion is also in line with survey responses, indicating other parents are one of the mostly-cited sources of information (see Panel A of Figure 2).

#### 6 Discussion and survey evidence

We discuss here potential mechanisms driving the treatment effects unveiled in Section 5, assisted by descriptive evidence from parental surveys administered at MTP meetings.<sup>41</sup> Although we can ultimately offer only suggestive evidence, we argue that our results reflect the impact of providing hard-to-find information on non-test score school attributes (see Section 3).

MTP meetings are presented and perceived as an information treatment, and our results are consistent with this interpretation. Parents are invited to the meeting to listen to 'insider' information and honest opinion on local secondary schools from peers who have recently chosen them. Consistently, parents declare to rely on MTP as a source of information. About 40% of survey respondents list MTP as one of the sources they mostly rely on, with only school open days and other parents' opinion scoring higher. Learning about local schools reportedly has an impact on parents' choices, in line with our main results, as 90% of respondents declare to have changed their mind after attending the meetings. In line with this hypothesis, we estimate larger MTP effects for parents with likely weaker knowledge of the local school market, either because of their ethnicity, language, or residential location (see Section 5.3).

Parents reportedly value a wide array of school attributes not necessarily correlated with academic performance. Most sought-after school attributes include, e.g., welcoming atmosphere,

 $<sup>^{40}</sup>$ Assuming the average competition effect is similar between exposed and unexposed parents, a one standard deviation higher exposure to treated peers increases enrolment of non-treated parents at MTP-promoted schools by 1.5 pp (= 0.55 + 0.95), almost half the direct impact of the programme.

<sup>&</sup>lt;sup>41</sup>We report data for a survey administered in 2019. We collect a sample of 195 survey responses, reporting opinions for 20 primary schools, of about 50% of parents participating to the meetings.

<sup>&</sup>lt;sup>42</sup>Panel A of Figure 2, plots the share of respondents who answered 5 to the following question: "How much do you rely on the following sources of information? 1 = not at all and 5 = a lot".

<sup>&</sup>lt;sup>43</sup>Two-thirds of them report an improved perception of local secondary schools, while the remaining started to consider schools they had previously ruled out.

inclusive ethos or pastoral care, while academic performance is among the ones least-frequently mentioned (Panel B of Figure 2). Combined with results in Panel A, where school performance tables are not among the most cited sources of information, survey evidence suggests that parents seek to learn about hard-to-find non-test score school attributes by participating to the meetings.

MTP provides information on day-to-day life at local state schools that are hard to gather elsewhere. We document this by analysing which are the words that are most mentioned during MTP meetings. Figure 7 (Panel A) shows that while on average about 66% of the words that are said during MTP meetings concern the atmosphere and environment of the promoted secondary schools, only about 27% of the words concern student performance (and the remaining 7% concern teachers). On one hand, panel discussion focused on attributes such as school values, enforcement of discipline, safety or available outdoor space. On the other hand, information on school performance or peer quality are already widespread through performance tables and rarely mentioned at the meetings. Figure 7 (Panel B) further shows that specific attributes discussed at the meetings are, amongst others, student behaviour, support and well-being, school bullying and lunch policies, as well as creativity and friendliness.

In conclusion, when combined with our results, survey evidence and text analysis of meetings' minutes suggest parents respond to hard-to-find information on non-test score school attributes.<sup>45</sup>

#### 7 Cost-Benefit Analysis

We finally present a back-of-the-envelope calculation of the benefits and costs of MTP from the perspective of the secondary state school system. This exercise is aimed at informing interested stakeholders, such as parental organisations, state schools and LAs, which could consider the possibility of implementing similar programs. Indeed, beyond providing parents with information they value, programs such as MTP could represent an opportunity for secondary schools

<sup>&</sup>lt;sup>44</sup>Atmosphere and environment include all words that can be traced to the following categories: welcoming atmosphere, neighbourhood characteristics, inclusive ethos, pastoral care, discipline, extra activities and facilities. Performance includes achievement, curriculum and how the school stretches high achievers. Uncategorised words were excluded from the count. Words were extracted from meeting minutes of the 2020 MTP round. A complete description of the extraction process, text selection and word categorisation is provided in Appendix C.

<sup>&</sup>lt;sup>45</sup>Another possible mechanism that may (partly) explain our results is that, through interaction with motivated peers that chose public-sector education, MTP may have relaxed parental prejudice against state-funded schools. With available data, we are not in a position to offer evidence about this hypothesis.

to raise additional resources and improve their finances.

We begin by calculating the average benefits implied by our estimates. On average, 1 additional student enrols into state-funded schools per MTP meeting. Considering 2014, the first year where MTP was scaled up to reach several local primary schools, this would imply 10 additional students opting for the state sector (see Figure 1). The 2020 - 2021 London average of the per-pupil secondary school funding allocation stands at about £6,913. Using this figure, we obtain an overall increase in state-school funding of 69,130 for 2014. Assuming a constant effect of MTP throughout the period of our analysis after the pilot phase (2014 – 2018) implies an overall increase in funding available to secondary school of £587,605.

Increased enrolment also drives an increase in school costs. However, it is reasonable to assume that, at least in the short-term, it is not possible for schools to expand capacity that is, responding to an increase in enrolment by increasing the number of classes and, therefore, teaching staff. Hence, we assume that one additional student i) does not drive an increase in school spending on teaching and general staff and ii) does not drive an increase in school 'fixed costs', such as building maintenance. We estimate that 'fixed costs' represent about 32% of 'running costs', that is school expenses excluding staff.<sup>47</sup> Under these assumptions, one additional pupil drives an increase of about £1,520 (£129,200 overall) in terms of running costs.<sup>48</sup> Finally, secondary schools pay £380 to enter the meeting.

Overall, this exercise suggests that the state school sector have largely benefited from MTP, with a net gain of about £318,945 over the 5 years of the program.<sup>49</sup> The increase in school

 $<sup>^{46}</sup>$ The overall increase in resources is obtained multiplying £6,913 by the total number of meetings in 2014-2018, which are 85 (Figure 1). Updated LA and school funding allocations can be found here: https://commonslibrary.parliament.uk/school-funding-2021-22-find-constituency-and-school-level-allocations/. This interactive website - and the data publicly available following the link - can be used to compute the increase in resources that corresponds to different funding allocations. To exemplify, using the average 2021 school funding allocation outside Greater London (about £5,786) would imply an overall increase in resources available of about 491.810.

<sup>&</sup>lt;sup>47</sup>We follow the categorisation of school expenditures provided by the DfE; see e.g. https://www.gov.uk/government/statistics/expenditure-on-education-children-and-young-peoples-services-academic-year-2011-to-2012. We calculate the share of 'fixed costs' over the total of running costs using aggregate figures for England available at the same link. Among running costs we include: cleaning and caretaking, water and sewerage, energy, rates, other occupation costs, learning resources (not ICT), ICT learning resources, examination fees, administrative supplies, other insurance premiums, catering supplies. We exclude: building and grounds maintenance and improvement, special facilities, agency supply teaching staff, bought-in professional services - curriculum, bought-in professional services - other, loan interest, community focused extended school staff and costs.

 $<sup>^{48}</sup>We$  use per-pupil estimates obtained here: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\_data/file/219504/sfr35-2012\_001.pdf. We obtain £1,520 by multiplying £1,340 by 0.68 (share of non-fixed running costs) and then convert the resulting amount in 2021 pounds using the CPI deflator.

<sup>&</sup>lt;sup>49</sup>This is obtained by subtracting total running costs and total participation costs from the total increase in funding available. Total participation costs are obtained multiplying £380 by the secondary school/meeting com-

resources can benefit all state-school students and mitigate concerns about schools' financial viability. This suggests that relatively simple and low-cost interventions providing parents with hard-to-find information on school attributes they value can improve state-school finances and weaken concerns about adverse effects of school choice on educational stratification and inequality.

#### 8 Conclusion

In this paper, we look at how the provision of hard-to-find information on non-test score attributes affects school choice. We evaluate an information intervention in the London Borough of Camden, named Meet The Parents, which provided parents with information on environment and atmosphere at local state-funded secondary schools that is typically not possible to obtain from more traditional sources. Our difference-in-differences design compares enrolment decision of parents attending a primary school organising an MTP meeting to those of parents attending schools located in the same educational market which did not participate to MTP.

We find that MTP increased the probability of enrolling into state-funded secondary schools by about 2.8%. Results are driven by students with high academic ability and with high socioeconomic status. The programme shifts parents towards state schools that seem to be closer substitute to private schools, e.g., high-performing schools and those providing single-sex education. We interpret this evidence as showing that parents do not value private school *per se* but rather are interested in a number of school attributes such as discipline, inclusiveness or safety, and once provided with information on these traits they are more likely to choose state-funded schools. Survey evidence and text analysis of MTP meetings minutes further corroborate this interpretation.

Our results have important policy implications, as estimated impacts of MTP suggest that low-cost interventions may affect parental choices, thereby improving state school finances and student composition. MTP-style interventions can therefore weaken concerns about adverse effects of school choice on educational stratification and inequality (Hsieh and Urqiuola, 2006; Laverde, 2020). At the same time, MTP may affect achievement outcomes of students whose families opt for the state sector. Investigating long-term effects of MTP may be an interesting direction for future work.

bination (= 367), since participating secondaries pay the entry fee *per-meeting*.

#### References

- Abdulkadiroglu, A., Pathak, P. A., Schellenberg, J., and Walters, C. R. (2020). Do parents value school effectiveness? *American Economic Review*, 110(5):1502–1539.
- Ainsworth, R., Dehejia, R., Pop-Eleches, K., and Urquiola, M. (2020). Information and preferences in household demand for school value added. Presented at the 2020 NBER Summer Institute, Education programme.
- Allende, C., Gallego, F., and Neilson, C. (2019). Approximating the equilibrium effects of informed school choice. Working paper.
- Altonji, J. G., Huang, C.-I., and Taber, C. R. (2015). Estimating the cream skimming effect of school choice. *Journal of Political Economy*, 123(2):266–324.
- Andrabi, T., Das, J., and Khwaja, A. I. (2017). Report cards: The impact of providing school and child test scores on educational markets. *American Economic Review*, 107(6):1535–63.
- Autor, D. H., Palmer, C. J., and Pathak, P. A. (2014). Housing market spillovers: Evidence from the end of rent control in Cambridge, Massachusetts. *Journal of Political Economy*, 122(3):661–717.
- Baker, A., Larcker, D. F., and Wang, C. C. (2021). How much should we trust staggered difference-in-differences estimates? *Available at SSRN 3794018*.
- Bertoni, M., Brunello, G., and Cappellari, L. (2020a). Who benefits from privileged peers? evidence from siblings in schools. *Journal of Applied Econometrics*. Forthcoming.
- Bertoni, M., Gibbons, S., and Silva, O. (2020b). School choice during a period of radical school reform. evidence from academyconversion in england. *Economic Policy*, 35(104):739–795.
- Bettinger, E., Cunha, N., Lichand, G., and Madeira, R. (2021). Are the effects of informational interventionsdriven by salience?
- Beuermann, D., Jackson, C. K., Navarro-Sola, L., and Pardo, F. (2019). What is a good school, and can parents tell? evidence on the multidimensionality of school output. NBER working paper 25342.

- Beuermann, D. W. and Jackson, C. K. (2020). The short and long-run effects of attending the schools that parents prefer. *Journal of Human Resources*. Forthcoming.
- Borusyak, K. and Jaravel, X. (2021). Revisiting event study designs: Robust and efficient estimation. *Working paper*.
- Burgess, S., Greaves, E., and Vignoles, A. (2019). School choice in England: evidence from national administrative data. *Oxford Review of Education*, 45(5):690–710.
- Burgess, S., Greaves, E., Vignoles, A., and Wilson, D. (2015). What parents want: School preferences and school choice. *Economic journal*, 125:1262–1289.
- Burgess, S., Greaves, E., Vignoles, A., Wilson, D., et al. (2009). Parental choice of primary school in england: What" type" of school do parents choose? CMPO Working Paper No. 09/224.
- Callaway, B. and Sant'Anna, P. H. (2021). Difference-in-differences with multiple time periods. *Journal of Econometrics*, 225(2):200–230.
- Carrell, S. E., Fullerton, R. L., and West, J. E. (2009). Does your cohort matter? measuring peer effects in college achievement. *Journal of Labor Economics*, 27(3):439–464.
- Cengiz, D., Dube, A., Lindner, A., and Zipperer, B. (2019). The effect of minimum wages on low-wage jobs. *The Quarterly Journal of Economics*, 134(3):1405–1454.
- De Chaisemartin, C. and d'Haultfoeuille, X. (2020). Two-way fixed effects estimators with heterogeneous treatment effects. *American Economic Review*, 110(9):2964–96.
- Deshpande, M. and Li, Y. (2019). Who is screened out? application costs and the targeting of disability programs. *American Economic Journal: Economic Policy*, 11(4):213–48.
- DfE (2016). Schools, pupils and their characteristics: January 2016. Statistical first release.
- Epple, D., Romano, R. E., and Urquiola, M. (2017). School vouchers: A survey of the Economics literature. *Journal of Economic Literature*, 55(2):441–492.
- Fack, G., Grenet, J., and He, Y. (2019). Beyond truth-telling: Preference estimation with centralized school choice and college admissions. *American Economic Review*, 109(4):1486–1529.

- Fadlon, I. and Nielsen, T. H. (2019). Family health behaviors. *American Economic Review*, 109(9):3162–91.
- Gibbons, S., McNally, S., and Viarengo, M. (2017). Does additional spending help urban schools? an evaluation using boundary discontinuities. *Journal of the European Economic Association*, 16:1618–1668.
- Glazerman, S. and Dotter, D. (2017). Market signals: Evidence on the determinants and consequences of school choice from a citywide lottery. *Educational Evaluation and Policy Analysis*, 39(4):593–619.
- Goodman-Bacon, A. (2021). Difference-in-differences with variation in treatment timing. Technical Report 2, National Bureau of Economic Research.
- Hastings, J., Neilson, C. A., and Zimmerman, S. D. (2015). The effects of earnings disclosure on college enrollment decisions. NBER Working Paper No. 21300.
- Hastings, J. S., Kane, T. J., and Staiger, D. O. (2010). Heterogeneous preferences and the efficacy of public school choice. *Unpublished Manuscript*.
- Hastings, J. S., Neilson, C. A., Ramirez, A., and Zimmerman, S. D. (2016). (Un)informed college and major choice: Evidence from linked survey and administrative data. *Economics of Education Review*, 51:136–151.
- Hastings, J. S. and Weinstein, J. M. (2008). Information, school choice, and academic achievement: Evidence from two experiments. *Quarterly Journal of Economics*, 123:1373–1414.
- Hoxby, C. M. (2003). *The Economics of School Choice*, chapter Could school choice be a tide that lifts all boats?, pages 287–341. Chicago: Univ. Chicago Press.
- Hsieh, C.-T. and Urqiuola, M. (2006). The effects of generalized school choice on achievement and stratification: Evidence from Chile's voucher program. *Journal of Public Economics*, 90:1477–1503.
- Independent Schools Council (2019). Year 13 exam results 2019 summary.
- Jackson, C. K. (2018). What do test scores miss? The importance ofteacher effects on non–test score outcomes. *Journal of Political Economy*, 126(5):2072–2107.

- Jackson, C. K., Johnson, R. C., and Persico, C. (2016). The effects of school spending on educational and economic outcomes: Evidence from school finance reforms. *Quarterly Journal of Economics*, 131(1):157–218.
- Jensen, R. (2010). The (perceived) returns to education and the demand for schooling. *The Quarterly Journal of Economics*, 125(2):515–548.
- Kessel, D. and Olme, E. (2017). Are parents uninformed? The impact of additional school quality information on school choice behavior, school placement and school segregation.
- Lavecchia, A. M., Liu, H., and Oreopoulos, P. (2016). Behavioral economics of education: Progress and possibilities. In *Handbook of the Economics of Education*, volume 5, pages 1–74. Elsevier.
- Laverde, M. (2020). Unequal assignments to public schools and the limits of schools choice. Unpublished Manuscript.
- MacLeod, W. B. and Urquiola, M. (2019). Is education consumption or investment? Implications for school competition. *Annual Review of Economics*, 11:563–589.
- Musset, P. (2012). School choice and equity: Current policies in OECD countries and a literature review. *OECD Education Working Papers*, (66).
- Pasini, E. (2019). Migration and competition for schools: Evidence from primary education in England. Unpublished manuscript.
- Sun, L. and Abraham, S. (2021). Estimating dynamic treatment effects in event studies with heterogeneous treatment effects. *Journal of Econometrics*, 225(2):175–199.

Table 1. Descriptive statistics for primary and secondary schools

|                                | (1)                   | (2)                       | (3)                  |
|--------------------------------|-----------------------|---------------------------|----------------------|
|                                | Participating schools | Non-participating         | Schools in bordering |
|                                | rarticipating schools | Camden schools            | LAs                  |
|                                |                       | Panel A. Primary school   | s                    |
| % FSM eligible                 | 0.340                 | 0.467                     | 0.309                |
| C                              | (0.168)               | (0.152)                   | (0.165)              |
| % with special education needs | 0.260                 | 0.423                     | 0.329                |
| •                              | (0.09)                | (0.294)                   | (0.189)              |
| % white                        | 0.508                 | 0.326                     | 0.397                |
|                                | (0.184)               | (0.184)                   | (0.224)              |
| % native speaker               | 0.603                 | 0.428                     | 0.575                |
| •                              | (0.205)               | (0.179)                   | (0.212)              |
| average English grade (s.d.)   | 0.203                 | -0.177                    | -0.054               |
|                                | (0.367)               | (0.373)                   | (0.425)              |
| average math grade (s.d.)      | 0.131                 | -0.194                    | -0.059               |
|                                | (0.318)               | (0.339)                   | (0.435)              |
| average school-home distance   | 0.895                 | 0.994                     | 1.08                 |
| 5                              | (0.409)               | (0.599)                   | (0.516)              |
| enrolment count per grade      | 39.652                | 30.331                    | 45.838               |
| 1 0                            | (13.638)              | (16.482)                  | (21.674)             |
| N                              | 30                    | 16                        | 352                  |
|                                | I                     | Panel B. Secondary school | ols                  |
| % FSM eligible                 | 0.412                 |                           | 0.352                |
| -                              | (0.123)               |                           | (0.179)              |
| % with special education needs | 0.266                 |                           | 0.431                |
|                                | (0.073)               |                           | (0.309)              |
| % white                        | 0.386                 |                           | 0.351                |
|                                | (0.162)               |                           | (0.196)              |
| % native                       | 0.502                 |                           | 0.507                |
|                                | (0.184)               |                           | (0.210)              |
| average English grade (s.d.)   | 0.120                 |                           | 0.200                |
|                                | (0.376)               |                           | (0.805)              |
| average math grade (s.d.)      | 0.077                 |                           | 0.204                |
|                                | (0.326)               |                           | (0.792)              |
| average school-home distancea  | 1.693                 |                           | 2.739                |
| -                              | (0.627)               |                           | (1.666)              |
| enrolment count per grade      | 165.541               |                           | 143.719              |
| 1 0                            | (42.861)              |                           | (83.716)             |
| N                              | 20                    |                           | 96                   |

**Note.** This table shows descriptive statistics for schools considered in the analysis. Statistics are computed considering the 2007-2013 period, preceding the introduction of MTP. Panel A describes primary schools. Participating institutions (column 1) are state primary schools organising at least one MTP event between 2013-2018. Other primary schools in Camden and in bordering local authorities are described in column (2) and (3), respectively. Panel B describes state secondary schools promoted in at least one MTP meeting between 2013-2018 (column 1) or not participating to MTP and located in bordering local authorities (column 3). Presented are sample averages considering one observation per school. Standard deviations are reported in parentheses.

Table 2. Average effects of MTP

|   | Dependent variable: enrolment indicator at secondary school |               |                 |         |  |  |  |  |
|---|---|---------------|-----------------|---------|--|--|--|--|
|   | (1)   | (2)           | (3)             | (4)     |  |  |  |  |
|   | Panel A. State-funded school                                |               |                 |         |  |  |  |  |
| MTP   | 0.014   | 0.006         | 0.025**         | 0.024** |  |  |  |  |
|   | (0.014)   | (0.011)       | (0.010)         | (0.010) |  |  |  |  |
|   |   | Panel B. MTP- | promoted school |         |  |  |  |  |
| MTP   | 0.551***  | 0.126***      | 0.015           | 0.014   |  |  |  |  |
|   | (0.035)   | (0.022)       | (0.013)         | (0.012) |  |  |  |  |
|   | Panel C. State-funded school in Camden                      |               |                 |         |  |  |  |  |
| MTP   | 0.592***  | 0.111***      | 0.013           | 0.013   |  |  |  |  |
|   | (0.044)   | (0.020)       | (0.010)         | (0.009) |  |  |  |  |
|   | Panel D. State-funded school in Camden's bordering LAs      |               |                 |         |  |  |  |  |
| MTP   | -0.499***   | -0.096***     | 0.012           | 0.011   |  |  |  |  |
|   | (0.037)   | (0.022)       | (0.010)         | (0.010) |  |  |  |  |
| Observations                                  | 180,398   | 180,398       | 180,398         | 180,398 |  |  |  |  |
| Year FE                                       | Y   | Y             | Y               | Y       |  |  |  |  |
| Census block (LSOA) FE                        | N   | Y             | Y               | Y       |  |  |  |  |
| Primary school FE                             | N   | N             | Y               | Y       |  |  |  |  |
| Individual and primary school characteristics | N   | N             | N               | Y       |  |  |  |  |

Note. The table shows DID estimates of the impact of MTP on the probability of attending a secondary state-funded school (Panel A), a school promoted suring MTP meetings (Panel B), a state-funded school located in Camden (Panel C) or in bordering LAs (Panel D). Column (1) controls for year fixed effects only; column (2) adds block (LSOA) fixed effects; column (3) adds school fixed effects; column (4) adds controls for individual characteristics (gender, ethnicity, language spoken at home, subsidised lunches eligibility and special educational needs) and school and block characteristics (quadratic polynomials in enrolment and number of children, respectively). Standard errors are clustered on schools and reported in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.

Table 3. MTP effect by school quality

|   | Dep   | Dependent variable: enrolment indicator at secondary school |                        |                         |  |  |  |  |
|---|---|---|------------------------|-------------------------|--|--|--|--|
|   | top quartile  | School performance in bottom quartile                       | Oversubscribed schools | Undersubscribed schools |  |  |  |  |
|   | (1)   | (2)   | (3)                    | (4)                     |  |  |  |  |
|   | Panel A. State-funded school                              |   |                        |                         |  |  |  |  |
| MTP   | 0.048**   | 0.017   | 0.029*                 | -0.029*                 |  |  |  |  |
|   | (0.022)   | (0.020)   | (0.016)                | (0.016)                 |  |  |  |  |
|   |   | Panel B. MTP-pr   | romoted school         |                         |  |  |  |  |
| MTP   | 0.044**   | 0.002   | 0.038**                | -0.051***               |  |  |  |  |
|   | (0.021)   | (0.021)   | (0.015)                | (0.014)                 |  |  |  |  |
|   | Panel C. State-funded school in Camden                    |   |                        |                         |  |  |  |  |
| MTP   | 0.063***  | -0.002  | 0.041***               | -0.047***               |  |  |  |  |
|   | (0.017)   | (0.021)   | (0.014)                | (0.015)                 |  |  |  |  |
|   | Panel D. State-funded school in Camden's neighbouring LAs |   |                        |                         |  |  |  |  |
| MTP   | -0.027*   | 0.023**   | -0.013                 | 0.022*                  |  |  |  |  |
|   | (0.015)   | (0.011)   | (0.009)                | (0.012)                 |  |  |  |  |
| Observations                                  | 125,997   | 125,997   | 156,304                | 156,304                 |  |  |  |  |
| Year FE                                       | Y   | Y   | Y                      | Y                       |  |  |  |  |
| Census block (LSOA) FE                        | Y   | Y   | Y                      | Y                       |  |  |  |  |
| Primary school FE                             | Y   | Y   | Y                      | Y                       |  |  |  |  |
| Individual and primary school characteristics | Y   | Y   | Y                      | Y                       |  |  |  |  |

Note. The table shows DID estimates of the impact of MTP on the probability of attending a secondary state-funded school (Panel A), a school promoted suring MTP meetings (Panel B), a state-funded school located in Camden (Panel C) or in bordering LAs (Panel D). Dependent variables in columns (1) and (2) are enrolment into schools scoring in the top and bottom quartile of KS4 math tests, respectively. Dependent variables in columns (3) and (4) are enrolment into oversubscribed and undersubscribed schools, respectively. All columns control for year, block (LSOA) and school fixed effects, as well as controls for individual characteristics (gender, ethnicity, language spoken at home, subsidised lunches eligibility and special educational needs) and school and block characteristics (quadratic polynomials in enrolment and number of children, respectively). Standard errors are clustered on schools and reported in parentheses. \*\*\* p<0.01, \*\*\* p<0.05, \*\* p<0.1.

Table 4. MTP effect by school type

|   | Dependent variable: enrolment indicator at secondary school |               |           |                   |                   |  |  |  |
|---|---|---------------|-----------|-------------------|-------------------|--|--|--|
|   | Community school  | Faith schools | Academy   | Foundation school | Single-sex school |  |  |  |
|   | (1)   | (2)           | (3)       | (4)               | (5)               |  |  |  |
| MTP   | 0.052***  | 0.071***      | -0.192*** | 0.093***          | 0.059***          |  |  |  |
|   | (0.016)   | (0.012)       | (0.022)   | (0.013)           | (0.014)           |  |  |  |
| Observations                                  | 180,398   | 180,398       | 180,398   | 180,398           | 180,398           |  |  |  |
| Year FE                                       | Y   | Y             | Y         | Y                 | Y                 |  |  |  |
| Census block (LSOA) FE                        | Y   | Y             | Y         | Y                 | Y                 |  |  |  |
| Primary school FE                             | Y   | Y             | Y         | Y                 | Y                 |  |  |  |
| Individual and primary school characteristics | Y   | Y             | Y         | Y                 | Y                 |  |  |  |

Note. The table shows DID estimates of the impact of MTP on the probability of attending a secondary state-funded community school (column 1), faith ("voluntary aided") school (column 2), academy school (column 3), foundation school (column 4) and single-sex school (column 5). All columns control for year, block (LSOA) and school fixed effects, as well as controls for individual characteristics (gender, ethnicity, language spoken at home, subsidised lunches eligibility and special educational needs) and school and block characteristics (quadratic polynomials in enrolment and number of children, respectively). Standard errors are clustered on schools and reported in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.

Table 5. MTP effect by school composition

|   | Dependent variable: school intake at baseline |                  |             |                        |  |  |
|---|---|------------------|-------------|------------------------|--|--|
|   | Special needs share                           | Free lunch share | White share | English-speaking share |  |  |
|   | (1)   | (2)              | (3)         | (4)                    |  |  |
| MTP   | -0.011***                                     | -0.008           | -0.011**    | -0.006                 |  |  |
|   | (0.003)                                       | (0.006)          | (0.005)     | (0.005)                |  |  |
| Observations                                  | 161,931                                       | 161,931          | 161,931     | 161,931                |  |  |
| Year FE                                       | Y   | Y                | Y           | Y                      |  |  |
| Census block (LSOA) FE                        | Y   | Y                | Y           | Y                      |  |  |
| Primary school FE                             | Y   | Y                | Y           | Y                      |  |  |
| Individual and primary school characteristics | Y   | Y                | Y           | Y                      |  |  |

Note. The table shows DID estimates of how MTP affects the characteristics of the chosen secondary state-funded school. Column (1) considers the share of students with special educational needs; column (2) considers the share of students eligible for subsidised lunches; column (3) considers the share of white students; column (4) considers the share of native students. All columns control for year, block (LSOA) and school fixed effects, as well as controls for individual characteristics (gender, ethnicity, language spoken at home, subsidised lunches eligibility and special educational needs) and school and block characteristics (quadratic polynomials in enrolment and number of children, respectively). The sample includes only students attending state-funded schools. Standard errors are clustered on schools and reported in parentheses. \*\*\* p<0.01, \*\* p<0.05. \* p<0.1.

Table 6. Heterogeneous effects of MTP by student characteristics

|   | Dependent variable: enrolment indicator at secondary school |          |                       |                 |                            |                 |                |                  |          |         |  |
|---|---|----------|-----------------------|-----------------|----------------------------|-----------------|----------------|------------------|----------|---------|--|
|   | FSM eligible  |          | Top achiever in Maths |                 | As                         | Asian           |                | English-speaking |          | Mover   |  |
|   | Yes   | No       | Yes                   | No              | Yes                        | No              | Yes            | No               | Yes      | No      |  |
|   | (1)   | (2)      | (3)                   | (4)             | (5)                        | (6)             | (7)            | (8)              | (9)      | (10)    |  |
|   | Panel A. State-funded school                                |          |                       |                 |                            |                 |                |                  |          |         |  |
| MTP   | 0.005   | 0.036*** | 0.117***              | 0.010           | 0.032***                   | 0.022*          | 0.019          | 0.037***         | 0.033*** | 0.020*  |  |
|   | (0.008)   | (0.012)  | (0.029)               | (0.007)         | (0.012)                    | (0.011)         | (0.012)        | (0.010)          | (0.009)  | (0.011) |  |
|   |   |          |                       | I               | Panel B. MTP- <sub>I</sub> | promoted scho   | ol             |                  |          |         |  |
| MTP   | -0.005  | 0.027*   | 0.177***              | 0.002           | 0.049***                   | 0.007           | 0.014          | 0.018            | 0.027    | 0.009   |  |
|   | (0.016)   | (0.015)  | (0.027)               | (0.015)         | (0.016)                    | (0.014)         | (0.015)        | (0.016)          | (0.017)  | (0.014) |  |
|   |   |          |                       | Pane            | l C. State-funde           | ed school in Ca | amden          |                  |          |         |  |
| MTP   | -0.009  | 0.029**  | 0.144***              | -0.001          | 0.034**                    | 0.006           | 0.005          | 0.023*           | 0.022    | 0.010   |  |
|   | (0.015)   | (0.012)  | (0.028)               | (0.014)         | (0.017)                    | (0.011)         | (0.013)        | (0.012)          | (0.015)  | (0.011) |  |
|   |   |          | I                     | Panel D. State- | funded school i            | in Camden's ne  | eighbouring LA | As               |          |         |  |
| MTP   | 0.022   | 0.003    | -0.035                | 0.012           | 0.018                      | 0.011           | 0.012          | 0.016            | 0.014    | 0.009   |  |
|   | (0.017)   | (0.013)  | (0.031)               | (0.016)         | (0.016)                    | (0.011)         | (0.016)        | (0.012)          | (0.017)  | (0.012) |  |
| Observations                                  | 50,052  | 130,018  | 36,596                | 117,943         | 29,779                     | 150,326         | 101,464        | 78,512           | 52,028   | 128,008 |  |
| Year FE                                       | Y   | Y        | Y                     | Y               | Y                          | Y               | Y              | Y                | Y        | Y       |  |
| Census block (LSOA) FE                        | Y   | Y        | Y                     | Y               | Y                          | Y               | Y              | Y                | Y        | Y       |  |
| Primary school FE                             | Y   | Y        | Y                     | Y               | Y                          | Y               | Y              | Y                | Y        | Y       |  |
| Individual and primary school characteristics | Y   | Y        | Y                     | Y               | Y                          | Y               | Y              | Y                | Y        | Y       |  |

Note. The table shows DID estimates of the impact of MTP on the probability of attending a secondary state-funded school for different samples of children. Columns (1) and (2) consider subsidised lunches eligibility; columns (3) and (4) consider KS2 test scores; columns (5) and (6) consider asian ethnicity; columns (7) and (8) consider student's country of origin; columns (9) and (10) consider students who have changed residence during primary school; columns (11) and (12) consider gender. All columns control for year, block (LSOA) and school fixed effects, as well as controls for individual characteristics (gender, ethnicity, language spoken at home, subsidised lunches eligibility and special educational needs) and school and block characteristics (quadratic polynomials in enrolment and number of children, respectively). Standard errors are clustered on schools and reported in parentheses. \*\*\*\* p<0.01, \*\*\* p<0.05, \*\* p<0.1.

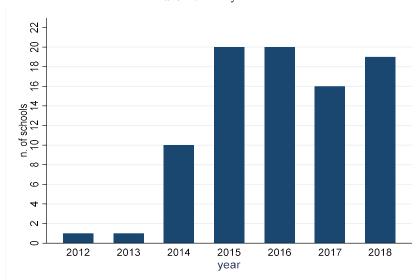
Table 7. Direct and indirect effects of MTP

|   | Dependent variable: enrolment indicator at secondary school |                           |                         |  |  |
|---|---|---------------------------|-------------------------|--|--|
|   | All schools   | Oversubscribed schools    | Undersubscribed schools |  |  |
|   | (1)   | (2)                       | (3)                     |  |  |
|   | P   | anel A. State-funded sch  | nool                    |  |  |
| MTP   | 0.0228**  | 0.0302                    | -0.0302                 |  |  |
|   | (0.0104)  | (0.0248)                  | (0.0248)                |  |  |
| MTPI  | 0.0008  | 0.0056                    | -0.0056                 |  |  |
|   | (0.0014)  | (0.0035)                  | (0.0035)                |  |  |
| MTP*MTPI                                      | -0.0002   | -0.0056                   | 0.0056                  |  |  |
|   | (0.0024)  | (0.0042)                  | (0.0042)                |  |  |
|   | Pa  | nel B. MTP-promoted so    | chool                   |  |  |
| MTP   | 0.0361  | 0.0443**                  | -0.0293                 |  |  |
|   | (0.0222)  | (0.0218)                  | (0.0259)                |  |  |
| MTPI  | 0.0055*   | 0.0090***                 | -0.0038                 |  |  |
|   | (0.0032)  | (0.0028)                  | (0.0044)                |  |  |
| MTP*MTPI                                      | -0.0095**   | -0.0100***                | -0.0005                 |  |  |
|   | (0.0045)  | (0.0034)                  | (0.0056)                |  |  |
|   | Panel (   | C. State-funded school in | n Camden                |  |  |
| MTP   | 0.0371**  | 0.0425**                  | -0.0180                 |  |  |
|   | (0.0148)  | (0.0184)                  | (0.0227)                |  |  |
| MTPI  | 0.0027  | 0.0096***                 | -0.0069*                |  |  |
|   | (0.0028)  | (0.0026)                  | (0.0035)                |  |  |
| MTP*MTPI                                      | -0.0076**   | -0.0094***                | 0.0004                  |  |  |
|   | (0.0034)  | (0.0030)                  | (0.0044)                |  |  |
|   | Panel D. State-ft   | unded school in Camden'   | s neighbouring LAs      |  |  |
| MTP   | -0.0084   | -0.0105                   | -0.0035                 |  |  |
|   | (0.0137)  | (0.0148)                  | (0.0209)                |  |  |
| MTPI  | 0.0002  | -0.0032                   | 0.0030                  |  |  |
|   | (0.0031)  | (0.0022)                  | (0.0032)                |  |  |
| MTP*MTPI                                      | 0.0045  | 0.0025                    | 0.0029                  |  |  |
|   | (0.0035)  | (0.0029)                  | (0.0041)                |  |  |
| Observations                                  | 164,938   | 144,198                   | 144,198                 |  |  |
| Year FE                                       | Y   | Y                         | Y                       |  |  |
| Census block (LSOA) FE                        | Y   | Y                         | Y                       |  |  |
| Primary school FE                             | Y   | Y                         | Y                       |  |  |
| Individual and primary school characteristics | Y   | Y                         | Y                       |  |  |

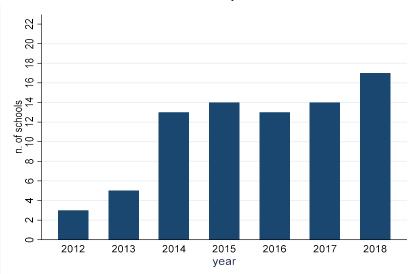
Note. The table shows DID estimates of the direct and indirect effects of MTP on the probability of attending a secondary state-funded school (Panel A), a school promoted suring MTP meetings (Panel B), a state-funded school located in Camden (Panel C) or in bordering LAs (Panel D). Dependent variables in columns (2) and (3) are indicators for enrolment into oversubscribed and undersubscribed schools, respectively. All columns control for year, block (LSOA) and school fixed effects, as well as controls for individual characteristics (gender, ethnicity, language spoken at home, subsidised lunches eligibility and special educational needs) and school and block characteristics (quadratic polynomials in enrolment and number of children, respectively). Standard errors are clustered on schools and reported in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.

Figure 1. Rollout of MTP

Panel A. Primary schools

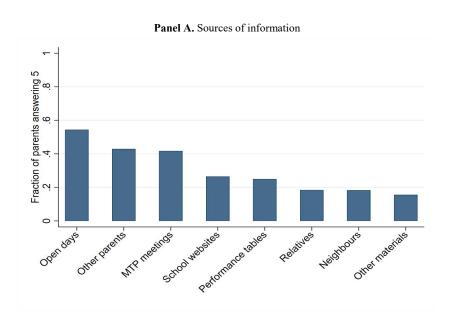


Panel B. Secondary schools

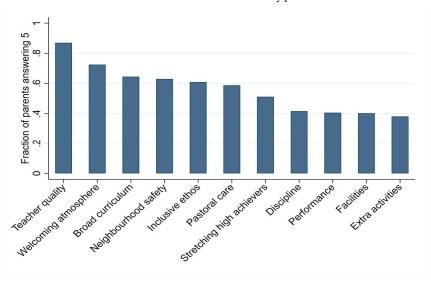


**Note.** The figure shows the number of primary schools (Panel A) and secondary schools (Panel B) participating to the MTP programme by meeting year.

Figure 2. The role of information sources and school attributes in parental choice

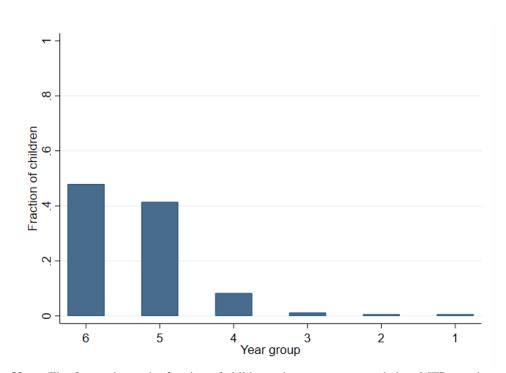


Panel B. School attributes valued by parents



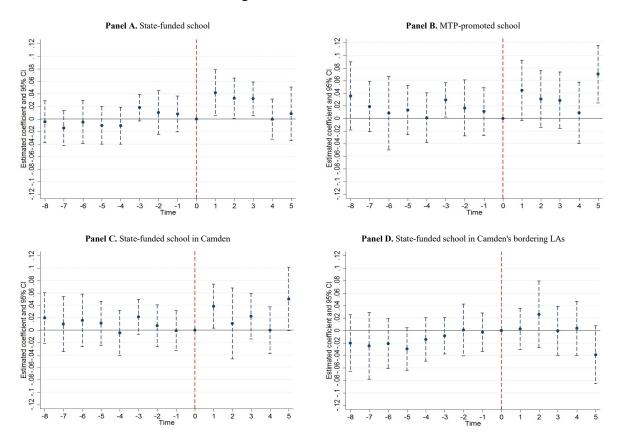
**Note.** The figure shows the fraction of parents valuing different sources of information (Panel A) and different school attributes (Panel B) when they choose a secondary school for their children. Answers were collected through a survey administered to parents attending MTP meeting in 2019, the latest programme wave. See Sectiuon 6 for definitions and details.

Figure 3. Participation to MTP meetings by year group



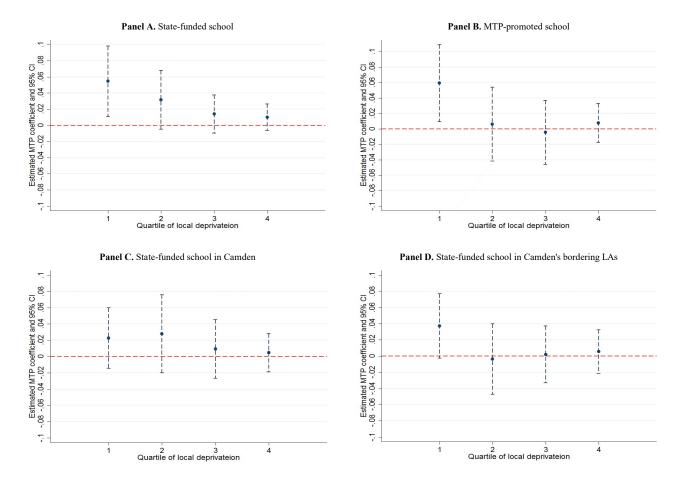
**Note**. The figure shows the fraction of children whose parents attended an MTP meeting by grade (year group) of enrolment. Answers were collected through a survey administered to parents attending MTP meeting in 2019. See Section 2.3 for details.

Figure 4. MTP effects over time



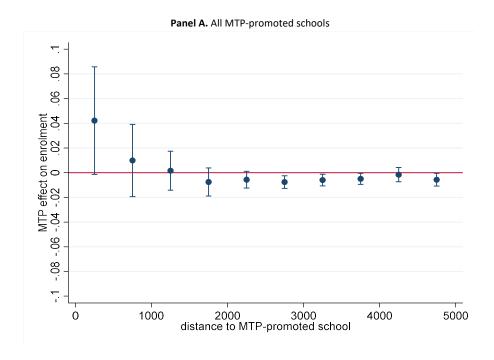
Note. The figure shows event graphs of student enrolment outcomes around the time of entrance into the MTP programme. The sample considered is formed by students completing primary education in Camden or bordering school districts. Time on the horizontal axis is computed subtracting the year where a given school entered MTP to the year of the observation. Control group students are considered in every time building placebo events. The figure plots time-specific coefficient of MTP treatment effect estimated from equation (2), along with 95% confidence intervals. Panel A considers enrolment into any state-funded secondary school, Panel B considers MTP-promoted schools, Panel C considers enrolment into any state-funded secondary school in Camden, and Panel D considers enrolment into any state-funded secondary school. See Section 4 for details.

Figure 5. MTP effect by local area deprivation

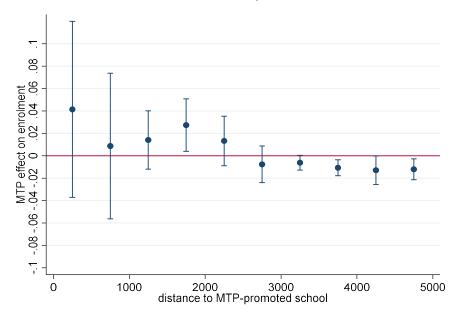


Note. The figure shows heterogeneous effects of the MTP programme on student enrolment by deprivation in local area (LSOA). The sample considered is formed by students completing primary education in Camden or bordering school districts. Quartile of deprivation is plotted on the horizontal axis. Deprivation is measured by the IDACI index, based on average family income in the area. The figure plots coefficients from equation (1) estimated separately by deprivation quartile, along with 95% confidence intervals. Panel A considers enrolment into any state-funded secondary school, Panel B considers MTP-promoted schools, Panel C considers enrolment into any state-funded secondary school in Camden, and Panel D considers enrolment into any state-funded secondary school in Camden or bordering LAs. Enrolment is measured at the first year of secondary school. See Section 5 for details.

Figure 6. MTP effect by distance to school



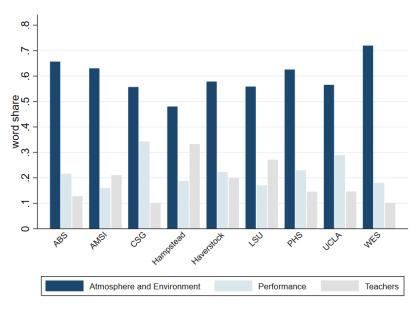
Panel B. Oversubscribed MTP-promoted schools



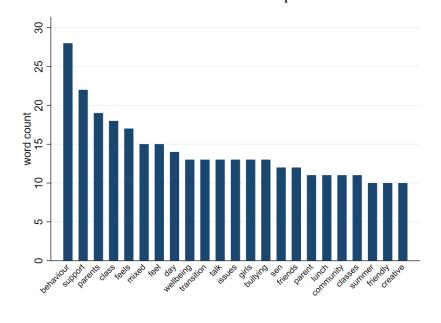
**Note.** The figure shows DID estimates of the impact of MTP on the probability of attending a secondary state-funded school promoted during MTP meetings. Plotted are coefficients from regressions similar to column (4) of Table 2, augmented with interactions between post-treatment indicator, MTP-exposure indicator, and home-school distance band indicators. Distance bands considered are 500-meter wide and coefficients are plotted at the central point of each band (e.g., the 0-500 meters coefficient is reported at a value of 250 of the x-axis). To plot this figure, a student-secondary-school level dataset is constructed by appending student-level records reporting home-school distance to each of the 22 secondary schools promoted during MTP meetings. Students residing further than 5 km from the school are not included. Outcome variable is a dummy indicating enrolment at the promoted secondary school considered, where Panel A includes all promoted institutions and Panel B restricts to oversubscribed promoted schools. The 95% confidence interval for each coefficient is plotted. See Section 5 for details.

Figure 7. Words mentioned during MTP meetings

Panel A. Topics discussed during MTP meetings



Panel B. Most-mentioned words on atmosphere and environment



**Note**. The figure shows the share of words concerning school atmosphere and environment vis-a-vis performance and teachers (Panel A) and the words with at least 10 mentions within the atmosphere and environment category (Panel B) Separate bars in Panel A are plotted by represented secondary school. Words were extracted from 2020 MTP meeting minutes separately for each MTP-promoted secondary school they were said in reference to. Uncategorised words (e.g. verbs) were excluded from the analysis. See Appendix C for details. The total number of words considered is 1,639, while the total number of words regarding atmosphere and environment, performance and teachers are 1,109, 414 and 116 respectively. Atmosphere and environment include all words that can be traced to the following categories: welcoming atmosphere, neighbourhood characteristics, inclusive ethos, pastoral care, discipline, extra activities and facilities. Performance includes achievement, curriculum and how the school stretches high achievers.

# Appendix A Additional Tables and Figures

Table A.1. Treated and control groups by year

|       | Number of:       |                  |  |  |  |
|-------|------------------|------------------|--|--|--|
| Year  | Control students | Treated students |  |  |  |
| (1)   | (2)              | (3)              |  |  |  |
|       |                  |                  |  |  |  |
| 2006  | 16,743           | 0                |  |  |  |
| 2007  | 16,652           | 0                |  |  |  |
| 2008  | 17,083           | 0                |  |  |  |
| 2009  | 16,887           | 0                |  |  |  |
| 2010  | 16,695           | 0                |  |  |  |
| 2011  | 17,068           | 0                |  |  |  |
| 2012  | 16,759           | 58               |  |  |  |
| 2013  | 16,970           | 56               |  |  |  |
| 2014  | 17,325           | 476              |  |  |  |
| 2015  | 17,221           | 909              |  |  |  |
| 2016  | 17,916           | 943              |  |  |  |
| 2017  | 18,486           | 591              |  |  |  |
| 2018  | 18,832           | 957              |  |  |  |
|       | ,                |                  |  |  |  |
| Total | 224,637          | 3,990            |  |  |  |

**Note.** The table shows n. of students in treatment and control group by year. Treatment group is defined as all students in a Year 5 or Year 6 when a MTP meeting is organised at their primary school. Control group is all other students enrolled in the same grades in a primary school in Camden or in bordering LAs. See Section 4 for details.

Table A.2. Effects of MTP on parental preference for state-funded schools

|   | Dependent variable: preference or enrolment indicator for secondary school |  |                                  |   |  |   |   |  |
|---|--|--|----------------------------------|---|--|---|---|--|
|   | 1st choice is a MTP-<br>promoted school                                    | 1st, 2nd or 3rd choice is a<br>MTP-promoted school | 1st choice is a Camden<br>school | 1st, 2nd or 3rd choice is<br>a Camden school<br>(4) | Enrolment at private school<br>despite offered a state school<br>(5) | Enrolment at private school despite<br>offered a MTP-promoted school<br>(6) | Enrolment at private school despite<br>offered a Camden school<br>(7) |  |
| МТР   | -0.015<br>(0.012)  | -0.015*<br>(0.009)                                 | 0.003<br>(0.010)                 | 0.018*<br>(0.010)                                   | -0.038***<br>(0.010)   | -0.031***<br>(0.012)  | -0.026*<br>(0.013)  |  |
| Observations                                  | 63,358   | 63,358   | 63,358                           | 63,358  | 62,882   | 5,474   | 13,384  |  |
| Year FE                                       | Y  | Y  | Y                                | Y   | Y  | Y   | Y   |  |
| Census block (LSOA) FE                        | Y  | Y  | Y                                | Y   | Y  | Y   | Y   |  |
| Primary school FE                             | Y  | Y  | Y                                | Y   | Y  | Y   | Y   |  |
| Individual and primary school characteristics | Y  | Y  | Y                                | Y   | Y  | Y   | Y   |  |

Note. The table shows DID estimates of the impact of MTP on the parental preferences for schools. Dependent variables in columns (1) and (2) are indicator for first choice school or one of the top three preferences being a MTP-promoted school, respectively. Dependent variables in columns (3) and (4) are indicator for first choice school or one of the top three preferences being a Camden school, respectively. All columns control for year, block (LSOA) and school fixed effects, as well as controls for individual characteristics (gender, ethnicity, language spoken at home, subsidised lunches eligibility and special educational needs) and school and block characteristics (quadratic polynomials in enrolment and number of children, respectively). Standard errors are clustered on schools and reported in parenthleses. \*\*\* p<0.01, \*\*p<0.05, \*p<0.1.

Table A.3. Effects of MTP by parental participation to the meetings

|   | Dep. Var.: enrolment indicator at secondary school |
|---|--|
|   | (1)  |
| <b>D.</b> 14 G. (                             |  |
| Panel A. State-f                              | unded school 0.030***                              |
| MIP   | (0.011)  |
| MTP*High participation                        | -0.018   |
| MIII Ingi_participation                       | (0.011)  |
| Panel B. MTP-pr                               | romoted school                                     |
| MTP   | 0.017  |
| *****   | (0.013)  |
| MTP*High participation                        | -0.009   |
|   | (0.016)  |
| Panel C. State-funded                         | l school in Camden                                 |
| MTP   | 0.012  |
|   | (0.010)  |
| MTP*High participation                        | 0.001  |
|   | (0.020)  |
| Panel D. State-funded school                  | in Camden's hardering I As                         |
| MTP   | 0.018*   |
|   | (0.010)  |
| MTP*High participation                        | -0.019   |
| 3 4 1   | (0.015)  |
| Observations                                  | 180,398  |
|   | 100,000  |
| Year FE                                       | Y  |
| Census block (LSOA) FE                        | Y  |
| Primary school FE                             | Y  |
| Individual and primary school characteristics | Y  |

**Note.** The table shows DID estimates of the heterogenous impact of MTP on secondary school enrolment by parental participation to the meeting. Dependent variables follow the ones in Table 2. Reported are estimates from equation (4) augmented with an interaction term between the MTP treatment indicator and a dummy variable equal to one if the number of parents participating to the meeting are above the median. Standard errors are clustered on schools and reported in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.

Figure A.1. MTP Meetings



Note. The figure shows an example of an MTP meeting.

Figure A.2. MTP Meetings: panellists and attendees



Panel A. Parents and students in the panel



Panel B. Parents and students in the audience **Note**. The figure shows an example of the structure of MTP meetings.

Figure A.3. Questionnaire administered to parents during MTP meetings (page 1)

| Supporting sphere in the community   | Meet the Parents Parent Que  | estionnaire   |
|--|--|---|
| Your child's school and year group:  |  |   |
| Event venue:   |  |   |
| Date:  |  |   |
| Your name:   |  |   |
| Your email:  |  |   |
| Your phone number:   |  |   |
| Schools represented in tonight's panel   | - please tick  |   |
| Acland Burghley Archer Academy Arts & Media School Islington Beacon High Central Foundation for Boys City of London Highgate Hill Elizabeth Garrett Anderson | ☐ Fortismere ☐ Greig Academy ☐ Hampstead ☐ Haverstock ☐ Highgate Wood ☐ Hornsey School for Girls ☐ Maria Fidelis | ☐ Mary Magdelene Academy ☐ Parliament Hill ☐ Regent High ☐ St Mary & St Johns ☐ UCL Academy ☐ William Ellis |
| The following 4 questions refer to your  | child  |   |
| 1. Gender:   | ☐ Female ☐ Male ☐ Other  |   |
| 2. Eligibility for Free School Meals:  | ☐ Yes ☐ No   |   |
| 3. Language spoken at home:   Eng  | lish   |   |
| 4. Ethnicity:  African Any Other Asian Background Any Other Black Background Any Other Ethnic Group Any Other Mixed Background Any Other White Background    | ☐ Bangladeshi ☐ Caribbean ☐ Chinese ☐ Gypsy / Romany ☐ Indian ☐ Irish  | Pakistani White and Asian White and Black African White and Black Caribbean White British                   |
| What type of school are you considerin   | g for your child? Please select all that a   | pply.   |
| ☐ Academy ☐ Non-academy School ☐ Grammar School  | ☐ Free School ☐ Church of England School   | ☐ Roman Catholic School ☐ Other Faith School  |

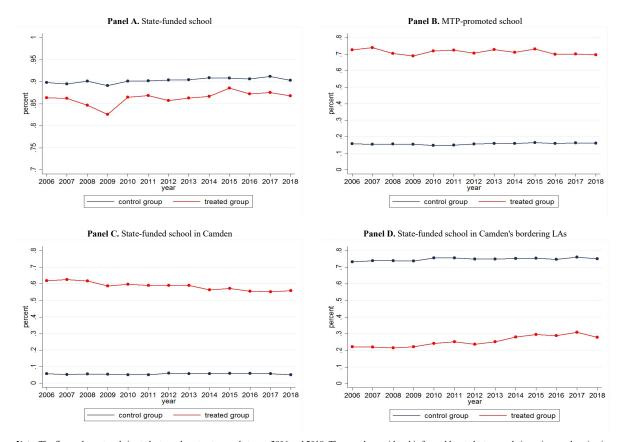
**Note**. The figure shows the template of the questionnaire administered to parents (page 1).

Figure A.4. Questionnaire administered to parents during MTP meetings (page 2)

|  |  | 1               | 2          | 3          | 4               | 5  |
|--|--|-----------------|------------|------------|-----------------|----|
| Pastoral care  Results  Quality of facilities  Extra curricular activities  Inclusive ethos  Discipline  School neighbourhood safety  Welcoming atmosphere / environment  Stretching high achievers  How much do you rely on the following sources of information? 1 = not at all and 5 = a lot  1 2 3 4 5  Meet the Parents meetings  Other parents  Neighbours  Relatives  School open days  School websites  Performance tables  Other material (e.g. leaflets, brochures)  These questions are crucial feedback for this project.  is event made you look round a school you had not previously planned to? If so, please name the school is a school you had not previously planned to? If so, please name the school you had not previously planned to? If so, please name the school you had not previously planned to? If so, please name the school you had not previously planned to? If so, please name the school you had not previously planned to? If so, please name the school you had not previously planned to? If so, please name the school you had not previously planned to? If so, please name the school you had not previously planned to? If so, please name the school you had not previously planned to? If so, please name the school you had not previously planned to? If so, please name the school you had not previously planned to? If so, please name the school you had not previously planned to? If so, please name the school you had not previously planned to? If so, please name the school you had not previously planned to? If so, please name the school you had not previously planned to? If so, please name the school you had not previously planned to? If so, please name the school you had not previously planned to? If so, please name the school you had not previously planned to? If so, please name the school you had not previously planned to? If so, please name the school you had not previously planned to? If you had not previously pl | Overall quality of teaching                          |                 |            |            |                 |    |
| Results  | Broad curriculum including arts & sport              |                 |            |            |                 |    |
| Quality of facilities  | Pastoral care  |                 |            |            |                 |    |
| Extra curricular activities  | Results  |                 |            |            |                 |    |
| Inclusive ethos  | Quality of facilities                                |                 |            |            |                 |    |
| Discipline  School neighbourhood safety  Welcoming atmosphere / environment  Stretching high achievers  How much do you rely on the following sources of information? 1 = not at all and 5 = a lot  1 2 3 4 5  Meet the Parents meetings  Other parents  Neighbours  Relatives  School open days  School websites  Performance tables  Other material (e.g. leaflets, brochures)  These questions are crucial feedback for this project.  is event made you look round a school you had not previously planned to? If so, please name the school in the project is a school of the parent in the project is event made you look round a school you had not previously planned to? If so, please name the school is a school in the project is a school in the project is event made you look round a school you had not previously planned to? If so, please name the school is a school in the project is a school i | Extra curricular activities                          |                 |            |            |                 |    |
| School neighbourhood safety  Welcoming atmosphere / environment  Stretching high achievers  How much do you rely on the following sources of information? 1 = not at all and 5 = a lot  1 2 3 4 5  Meet the Parents meetings  Other parents  Neighbours  Relatives  School open days  School open days  School websites  Performance tables  Other material (e.g. leaflets, brochures)  These questions are crucial feedback for this project.   | Inclusive ethos                                      |                 |            |            |                 |    |
| Welcoming atmosphere / environment   | Discipline   |                 |            |            |                 |    |
| How much do you rely on the following sources of information? 1 = not at all and 5 = a lot    1  | School neighbourhood safety                          |                 |            |            |                 |    |
| How much do you rely on the following sources of information? 1 = not at all and 5 = a lot  1 2 3 4 5  Meet the Parents meetings  Other parents  Neighbours  Relatives  School open days  School open days  School websites  Performance tables  Other material (e.g. leaflets, brochures)  These questions are crucial feedback for this project.  These questions are crucial feedback for this project.   | Welcoming atmosphere / environment                   |                 |            |            |                 |    |
| Meet the Parents meetings  | Stretching high achievers                            |                 |            |            |                 |    |
| Meet the Parents meetings Other parents Other material (e.g. leaflets, brochures)  These questions are crucial feedback for this project.  is event made you look round a school you had not previously planned to? If so, please name the school you had not previously planned to? If so, please name the school you had not previously planned to? If so, please name the school you had not previously planned to? If so, please name the school you had not previously planned to? If so, please name the school you had not previously planned to? If so, please name the school you had not previously planned to? If so, please name the school you had not previously planned to? If so, please name the school you had not previously planned to? If so, please name the school you had not previously planned to? If so, please name the school you had not previously planned to? If so, please name the school you had not previously planned to? If so, please name the school you had not previously planned to? If so, please name the school you had not previously planned to? If so, please name the school you had not previously planned to? If so, please name the school you had not previously planned to? If so, please name the school you had not previously planned to? If so, please name the school you had not previously planned to? If so, please name the school you had not previously planned to? If so, please name the school you had not previously planned to?   |  |                 |            |            |                 |    |
| Meet the Parents meetings  | How much do you rely on the following sources        | of information? | 1 = not    | at all and | $15 = a \log a$ | ot |
| Other parents  Neighbours  Relatives  School open days  School websites  Performance tables  Other material (e.g. leaflets, brochures)  These questions are crucial feedback for this project.  is event made you look round a school you had not previously planned to? If so, please name the school you had not previously planned to? If so, please name the school you had not previously planned to? If so, please name the school you had not previously planned to? If so, please name the school you had not previously planned to? If so, please name the school you had not previously planned to? If so, please name the school you had not previously planned to? If so, please name the school you had not previously planned to? If so, please name the school you had not previously planned to?   |  | 1               | 2          | 3          | 4               | 5  |
| Neighbours  Relatives  School open days  School websites  Performance tables  Other material (e.g. leaflets, brochures)  These questions are crucial feedback for this project.  is event made you look round a school you had not previously planned to? If so, please name the school you had not previously planned to? If so, please name the school you had not previously planned to? If so, please name the school you had not previously planned to? If so, please name the school you had not previously planned to? If so, please name the school you had not previously planned to?   |  |                 |            |            |                 |    |
| Relatives  School open days  School websites  Performance tables  Other material (e.g. leaflets, brochures)  These questions are crucial feedback for this project.  is event made you look round a school you had not previously planned to? If so, please name the school you had not previously planned to? If so, please name the school you had not previously planned to? If so, please name the school you had not previously planned to? If so, please name the school you had not previously planned to? If so, please name the school you had not previously planned to? If so, please name the school you had not previously planned to? If so, please name the school you had not previously planned to?   |  |                 |            |            |                 |    |
| School open days  School websites  Performance tables  Other material (e.g. leaflets, brochures)  These questions are crucial feedback for this project.  is event made you look round a school you had not previously planned to? If so, please name the school you had not previously planned to? If so, please name the school you had not previously planned to?   | Neighbours   |                 |            |            |                 |    |
| School websites  | Relatives  |                 |            |            |                 |    |
| Performance tables  Other material (e.g. leaflets, brochures)  These questions are crucial feedback for this project.  is event made you look round a school you had not previously planned to? If so, please name the scho  | School open days                                     |                 |            |            |                 |    |
| Other material (e.g. leaflets, brochures)  |  |                 |            |            |                 |    |
| These questions are crucial feedback for this project. is event made you look round a school you had not previously planned to? If so, please name the scho  |  |                 |            |            |                 |    |
| is event made you look round a school you had not previously planned to? If so, please name the scho   | Other material (e.g. leaflets, brochures)            |                 |            |            |                 |    |
|  |  |                 |            |            |                 |    |
|  | u plan to discuss what you have learnt from this mee | ting with non-p | oarticipat | ing pare   | nts?            |    |
| u plan to discuss what you have learnt from this meeting with non-participating parents?   |  |                 |            |            |                 |    |
| u plan to discuss what you have learnt from this meeting with non-participating parents?   | elcome any comments                                  |                 |            |            |                 |    |
|  | elcome any comments                                  |                 |            |            |                 |    |
|  | elcome any comments                                  |                 |            |            |                 |    |

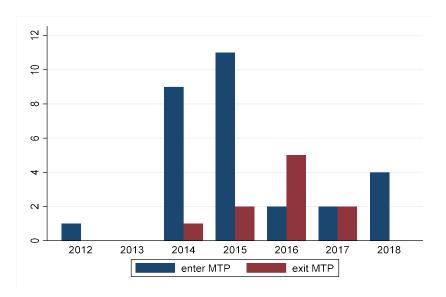
Note. The figure shows the template of the questionnaire administered to parents (page 2).

Figure A.5. Pre-trends for enrolment into a state-funded secondary school



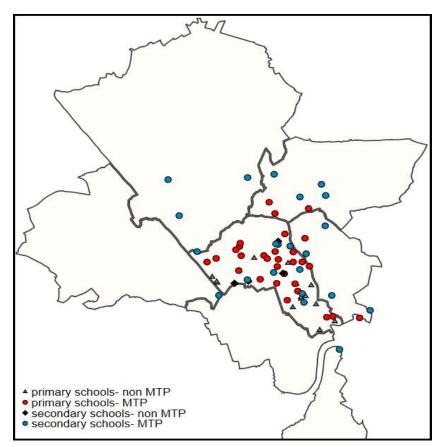
Note. The figure shows trends in student enrolment outcomes between 2006 and 2018. The sample considered is formed by students completing primary education in Camden or bordering school districts. Enrolment is measured at the first year of secondary school. See Section 4 for details.

Figure A.6. N. of schools entering and exiting MTP



**Note.** The figure shows the number of primary schools joining or leaving the MTP programme by meeting year.

Figure A.7. Geographical location of participating school



**Note.** The figure depicts geographical location of primary and secondary schools participating to MTP as well as non-participating institutions in the borough of Camden. Location is based on school postcode centroids. Represented are the borough of Camden, at the centre of the figure, and (from south, clockwise) the boroughs of Lambeth, Westminster, Brent, Barnet, Haringey and Islington.

### **Appendix B** Robustness checks

We turn here to explore the sensitivity of our results to alternative empirical specifications and potential threats to the validity of our estimates. First, because of the voluntary participation to the programme on a annually basis, schools (and then students they serve) can in principle leave and re-enter treatment, possibly more than once. Over the years considered, 10 out 29 primary schools leave the treatment before the end of the sample period: 2 in 2017, 5 in 2016, 2 in 2015 and 1 in 2014 (see Figure A.6). Moreover, 1 school exits treatment in 2017 and re-enters in 2018. On the other hand, the vast majority of schools enter treatment by 2015 (1 in 2012, 9 in 2014 and 11 in 2015). In our main specifications of equation (3), we keep all entries and exits as the nature of MTP can lead to effects that are year-specific. However, exit from the programme may happen endogenously as a result of the programme's effectiveness. We therefore estimate equation (3) by assigning to treatment all schools starting from the first year in which an MTP meeting was conducted, and we consider them treated thereafter irrespectively of whether they exited the programme. This procedure yields an 'intention-to-treat' estimate of the effect of MTP. The results on main enrolment outcomes are substantially unchanged, as shown in Table B.1.

Second, the choice of the control group – which we define as students attending untreated primary schools in Camden or bordering districts – is a priori unclear. Hence, we test the sensitivity of our results by broadening the control group to include all students attending any state-funded primary school in London. Indeed, as secondary schools take up large cohorts and students located further away from the institution, the choice of the parents does not necessarily need to be restricted to the local districts. Effects of MTP on enrolment using this alternative control group are similar to those presented in Table 2 (see Table B.2).

Finally, we explore the sensitivity of our estimates to choices concerning the treatment group. First, we estimate equation (3) without considering the first two years of the programme, 2012 and 2013, when MTP events were held only at one school and the initiative was at a pilot stage. Results from this approach mirror our main findings and are presented in Table B.3. Second, to provide evidence in support of the assumption that the entire cohort of students was exposed to the treatment, we estimate heterogeneous effects by parental participation. We augment equation (3) with an interaction term between the treatment indicator and a dummy variable equal to one if the number of parents participating to the meeting is above the median. As can be seen in Table A.3, the interaction terms are small and not statistically significant for

all outcomes considered. This result implies that, in line with our assumption, MTP impacts parental choice regardless actual participation to the meetings, most likely due to informational spillovers within parents in the same school-grade.<sup>1</sup>

Table B.1. Intention-to-treat effects of MTP

|   | Dependent variable: enrolment indicator at secondary school |                           |                         |         |  |
|---|---|---------------------------|-------------------------|---------|--|
|   | (1)   | (2)                       | (3)                     | (4)     |  |
|   |   | Panel A. State            | -funded school          |         |  |
| MTP   | 0.015   | 0.004                     | 0.024**                 | 0.021** |  |
|   | (0.012)   | (0.009)                   | (0.010)                 | (0.009) |  |
|   |   | Panel B. MTP-             | promoted school         |         |  |
| MTP   | 0.558***  | 0.135***                  | 0.018                   | 0.016   |  |
|   | (0.035)   | (0.022)                   | (0.013)                 | (0.012) |  |
|   |   | Panel C. State-fund       | ed school in Camden     |         |  |
| MTP   | 0.597***  | 0.118***                  | 0.011                   | 0.010   |  |
|   | (0.052)   | (0.020)                   | (0.010)                 | (0.009) |  |
|   | Pane  | el D. State-funded school | l in Camden's bordering | g LAs   |  |
| MTP   | -0.505***   | -0.105***                 | 0.014                   | 0.013   |  |
|   | (0.042)   | (0.021)                   | (0.013)                 | (0.013) |  |
| Observations                                  | 180,398   | 180,398                   | 180,398                 | 180,398 |  |
| Year FE                                       | Y   | Y                         | Y                       | Y       |  |
| Census block (LSOA) FE                        | N   | Y                         | Y                       | Y       |  |
| Primary school FE                             | N   | N                         | Y                       | Y       |  |
| Individual and primary school characteristics | N   | N                         | N                       | Y       |  |

Note. The table shows DID estimates of the intetion-to-treat impact of MTP on secondary school enrolment. Specifications and table structure follow the ones of Table 2. Here we keep all students in the treatment group once their school enters the programme, regardless early exit from MTP. Standard errors are clustered on schools and reported in parentheses. \*\*\*\* p<0.01, \*\*\* p<0.05, \*\* p<0.1.

<sup>&</sup>lt;sup>1</sup>Results considering the fraction of parents with respect to cohort size, rather than the absolute number of participants, are very similar and available upon request.

Table B.2. Effects of MTP with alternative control group

|   | Dependent variable: enrolment indicator at secondary school |                     |                     |           |  |  |
|---|---|---------------------|---------------------|-----------|--|--|
|   | (1)   | (2)                 | (3)                 | (4)       |  |  |
|   |   | Panel A. State      | e-funded school     |           |  |  |
| MTP   | 0.021   | 0.014               | 0.033***            | 0.031***  |  |  |
|   | (0.014)   | (0.011)             | (0.010)             | (0.010)   |  |  |
|   |   | Panel B. MTP-       | promoted school     |           |  |  |
| MTP   | 0.727***  | 0.137***            | 0.028**             | 0.027**   |  |  |
|   | (0.031)   | (0.022)             | (0.012)             | (0.012)   |  |  |
|   |   | Panel C. State-fund | ed school in Camden |           |  |  |
| MTP   | 0.668***  | 0.113***            | 0.016               | 0.015     |  |  |
|   | (0.044)   | (0.020)             | (0.010)             | (0.009)   |  |  |
|   | Panel D. State-funded school in Camden's bordering LAs      |                     |                     |           |  |  |
| MTP   | 0.054   | -0.072***           | 0.026***            | 0.026***  |  |  |
|   | (0.034)   | (0.022)             | (0.010)             | (0.009)   |  |  |
| Observations                                  | 1,070,291   | 1,070,291           | 1,070,291           | 1,070,291 |  |  |
| Year FE                                       | Y   | Y                   | Y                   | Y         |  |  |
| Census block (LSOA) FE                        | N   | Y                   | Y                   | Y         |  |  |
| Primary school FE                             | N   | N                   | Y                   | Y         |  |  |
| Individual and primary school characteristics | N   | N                   | N                   | Y         |  |  |

Note. The table shows DID estimates of the impact of MTP on secondary school enrolment. The Table follows structure and specifications of Table 2 and considers all students completing primary education 1 in untreated schools in Greater London as control group. See Section 5 for details. \*\*\* p < 0.01, \*\* p < 0.05, \* p < 0.1.

Table B.3. Effects of MTP ignoring the pilot stage

|   | Dependent variable: enrolment indicator at secondary school |                           |                         |         |
|---|---|---------------------------|-------------------------|---------|
|   | (1)   | (2)                       | (3)                     | (4)     |
|   |   | Panel A. State            | -funded school          |         |
| MTP   | 0.017   | 0.008                     | 0.025**                 | 0.024** |
|   | (0.013)   | (0.010)                   | (0.010)                 | (0.01)  |
|   |   | Panel B. MTP-             | promoted school         |         |
| MTP   | 0.553***  | 0.124***                  | 0.013                   | 0.012   |
|   | (0.036)   | (0.022)                   | (0.013)                 | (0.012) |
|   |   | Panel C. State-fund       | ed school in Camden     |         |
| MTP   | 0.593***  | 0.106***                  | 0.012                   | 0.011   |
|   | (0.046)   | (0.019)                   | (0.09)                  | (0.009) |
|   | Pane  | el D. State-funded school | l in Camden's bordering | g LAs   |
| MTP   | -0.497***   | -0.089***                 | 0.012                   | 0.012   |
|   | (0.038)   | (0.020)                   | (0.010)                 | (0.010) |
| Observations                                  | 180,284   | 180,284                   | 180,284                 | 180,284 |
| Year FE                                       | Y   | Y                         | Y                       | Y       |
| Census block (LSOA) FE                        | N   | Y                         | Y                       | Y       |
| Primary school FE                             | N   | N                         | Y                       | Y       |
| Individual and primary school characteristics | N   | N                         | N                       | Y       |

Note. The table shows DID estimates of the impact of MTP on secondary school enrolment not considering the 2012 and 2013 waves, where the programme was at a pilot stage. Specifications and table structure follow the ones of Table 2. Here we drop school-year observations from the only primary institution where meetings were organised in 2012 and 2013. Standard errors are clustered on schools and reported in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.

## **Appendix C** Text analysis of MTP meeting minutes

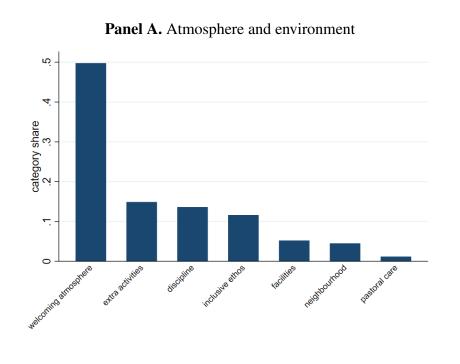
We obtained minutes of the 2020 round of MTP meetings tracking the comments from secondary school panellists regarding secondary schools promoted at MTP meetings. The following secondary schools were promoted in the meetings held in 2020: Acland Burghley School (ABS), Arts and Media School Islington (AMSI), the Camden School for Girls (CSG), Hampstead School, Haverstock School, La Sainte Union Catholic School (LSU), Parliament Hill School (PHS), the UCL Academy (UCLA) and the William Ellis School (WES). Meeting minutes are organised by secondary school and report what was said regarding the school during MTP meetings.

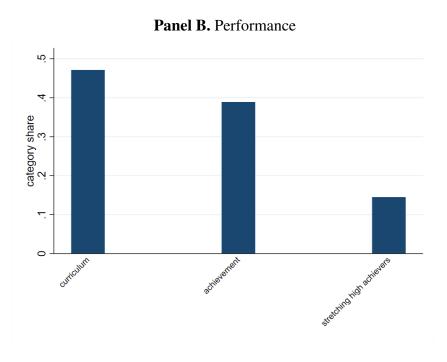
We create a words dataset using the following procedure:

- i. We extract all words except stop words' (e.g. articles, prepositions, pronouns, conjunctions) from each secondary school minutes' document;
- ii. We append all words left after (i) and create a dataset containing all words included in the minutes and the line of the document in which the word was found. In this dataset, each word is an observation;
- iii. We remove *observations* referring to the first row of a document, which is used to title the document. This leaves us with 2,769 words (excluding numbers);
- iv. We categorise the words following the categories of school attributes valued by parents as in Figure 2. At this stage, we drop from the dataset 1,130 words that could not be categorised, such as neutral words (e.g. department, easy, form, email) and verbs. The complete words allocation, including uncategorised words, can be found at the following link: https://docs.google.com/spreadsheets/d/leqlIurPsXvFCfvsztNrnll5wV9cnu\_pyWfLSroMA600/edit?usp=sharing.

We compute shares in Figure 7 using categorised words only (1,639). We group subcategories of Figure 2 in three broad categories - 'atmosphere and environment' (1,109 words), 'performance' (414 words) and 'teachers' (116 words). Figure C.1 below documents by how much each subcategory contributes to the first two categories ('teachers' has one component only).

#### C.1. Subcategories of words mentioned during MTP meetings





Note. The figure shows how much each subcategory contributes to 'atmosphere and environment' (Panel A) and 'performance' (Panel B).

#### Working Paper del Dipartimento di Economia e Finanza

- 1. L. Colombo, H. Dawid, *Strategic Location Choice under Dynamic Oligopolistic Competition and Spillovers*, novembre 2013.
- 2. M. Bordignon, M. Gamalerio, G. Turati, *Decentralization, Vertical Fiscal Imbalance, and Political Selection*, novembre 2013.
- 3. M. Guerini, *Is the Friedman Rule Stabilizing? Some Unpleasant Results in a Heterogeneous Expectations Framework*, novembre 2013.
- 4. E. Brenna, C. Di Novi, *Is caring for elderly parents detrimental to women's mental health? The influence of the European North-South gradient*, novembre 2013.
- 5. F. Sobbrio, Citizen-Editors' Endogenous Information Acquisition and News Accuracy, novembre 2013.
- 6. P. Bingley, L. Cappellari, *Correlation of Brothers Earnings and Intergenerational Transmission*, novembre 2013.
- 7. T. Assenza, W. A. Brock, C. H. Hommes, *Animal Spirits, Heterogeneous Expectations and the Emergence of Booms and Busts*, dicembre 2013.
- 8. D. Parisi, *Is There Room for 'Fear' as a Human Passion in the Work by Adam Smith?*, gennaio 2014.
- 9. E. Brenna, F. Spandonaro, *Does federalism induce patients' mobility across regions?* Evidence from the Italian experience, febbraio 2014.
- 10. A. Monticini, F. Ravazzolo, Forecasting the intraday market price of money, febbraio 2014.
- 11. Tiziana Assenza, Jakob Grazzini, Cars Hommes, Domenico Massaro, *PQ Strategies in Monopolistic Competition: Some Insights from the Lab*, marzo 2014.
- 12. R. Davidson, A. Monticini, *Heteroskedasticity-and-Autocorrelation-Consistent Bootstrapping*, marzo 2014.
- 13. C. Lucifora, S. Moriconi, *Policy Myopia and Labour Market Institutions*, giugno 2014.
- 14. N. Pecora, A. Spelta, Shareholding Network in the Euro Area Banking Market, giugno 2014.
- 15. G. Mazzolini, The economic consequences of accidents at work, giugno 2014.
- 16. M. Ambrosanio, P. Balduzzi, M. Bordignon, *Economic crisis and fiscal federalism in Italy*, settembre 2014.
- 17. P. Bingley, L. Cappellari, K. Tatsiramos, *Family, Community and Long-Term Earnings Inequality*, ottobre 2014.
- 18. S. Frazzoni, M. L. Mancusi, Z. Rotondi, M. Sobrero, A. Vezzulli, *Innovation and export in SMEs: the role of relationship banking*, novembre 2014.
- 19. H. Gnutzmann, *Price Discrimination in Asymmetric Industries: Implications for Competition and Welfare*, novembre 2014.
- 20. A. Baglioni, A. Boitani, M. Bordignon, *Labor mobility and fiscal policy in a currency union*, novembre 2014.
- 21. C. Nielsen, Rational Overconfidence and Social Security, dicembre 2014.
- 22. M. Kurz, M. Motolese, G. Piccillo, H. Wu, *Monetary Policy with Diverse Private Expectations*, febbraio 2015.
- 23. S. Piccolo, P. Tedeschi, G. Ursino, *How Limiting Deceptive Practices Harms Consumers*, maggio 2015.
- 24. A.K.S. Chand, S. Currarini, G. Ursino, *Cheap Talk with Correlated Signals*, maggio 2015.
- 25. S. Piccolo, P. Tedeschi, G. Ursino, *Deceptive Advertising with Rational Buyers*, giugno 2015.

- 26. S. Piccolo, E. Tarantino, G. Ursino, *The Value of Transparency in Multidivisional Firms*, giugno 2015.
- 27. G. Ursino, Supply Chain Control: a Theory of Vertical Integration, giugno 2015.
- 28. I. Aldasoro, D. Delli Gatti, E. Faia, *Bank Networks: Contagion, Systemic Risk and Prudential Policy*, luglio 2015.
- 29. S. Moriconi, G. Peri, *Country-Specific Preferences and Employment Rates in Europe*, settembre 2015.
- 30. R. Crinò, L. Ogliari, Financial Frictions, Product Quality, and International Trade, settembre 2015.
- 31. J. Grazzini, A. Spelta, An empirical analysis of the global input-output network and its evolution, ottobre 2015.
- 32. L. Cappellari, A. Di Paolo, *Bilingual Schooling and Earnings: Evidence from a Language-in-Education Reform*, novembre 2015.
- 33. A. Litina, S. Moriconi, S. Zanaj, *The Cultural Transmission of Environmental Preferences: Evidence from International Migration*, novembre 2015.
- 34. S. Moriconi, P. M. Picard, S. Zanaj, *Commodity Taxation and Regulatory Competition*, novembre 2015.
- 35. M. Bordignon, V. Grembi, S. Piazza, Who do you blame in local finance? An analysis of municipal financing in Italy, dicembre 2015.
- 36. A. Spelta, A unified view of systemic risk: detecting SIFIs and forecasting the financial cycle via EWSs, gennaio 2016.
- 37. N. Pecora, A. Spelta, Discovering SIFIs in interbank communities, febbraio 2016.
- 38. M. Botta, L. Colombo, *Macroeconomic and Institutional Determinants of Capital Structure Decisions*, aprile 2016.
- 39. A. Gamba, G. Immordino, S. Piccolo, *Organized Crime and the Bright Side of Subversion of Law*, maggio 2016.
- 40. L. Corno, N. Hildebrandt, A. Voena, Weather Shocks, Age of Marriage and the Direction of Marriage Payments, maggio 2016.
- 41. A. Spelta, Stock prices prediction via tensor decomposition and links forecast, maggio 2016.
- 42. T. Assenza, D. Delli Gatti, J. Grazzini, G. Ricchiuti, *Heterogeneous Firms and International Trade: The role of productivity and financial fragility*, giugno 2016.
- 43. S. Moriconi, Taxation, industry integration and production efficiency, giugno 2016.
- 44. L. Fiorito, C. Orsi, Survival Value and a Robust, Practical, Joyless Individualism: Thomas Nixon Carver, Social Justice, and Eugenics, luglio 2016.
- 45. E. Cottini, P. Ghinetti, *Employment insecurity and employees' health in Denmark*, settembre 2016.
- 46. G. Cecere, N. Corrocher, M. L. Mancusi, *Financial constraints and public funding for eco-innovation: Empirical evidence on European SMEs*, settembre 2016.
- 47. E. Brenna, L. Gitto, *Financing elderly care in Italy and Europe. Is there a common vision?*, settembre 2016.
- 48. D. G. C. Britto, *Unemployment Insurance and the Duration of Employment: Theory and Evidence from a Regression Kink Design*, settembre 2016.
- 49. E. Caroli, C.Lucifora, D. Vigani, *Is there a Retirement-Health Care utilization puzzle?* Evidence from SHARE data in Europe, ottobre 2016.
- 50. G. Femminis, From simple growth to numerical simulations: A primer in dynamic programming, ottobre 2016.
- 51. C. Lucifora, M. Tonello, Monitoring and sanctioning cheating at school: What works? Evidence from a national evaluation program, ottobre 2016.

- 52. A. Baglioni, M. Esposito, *Modigliani-Miller Doesn't Hold in a "Bailinable" World: A New Capital Structure to Reduce the Banks' Funding Cost*, novembre 2016.
- 53. L. Cappellari, P. Castelnovo, D. Checchi, M. Leonardi, *Skilled or educated? Educational reforms, human capital and earnings,* novembre 2016.
- 54. D. Britto, S. Fiorin, Corruption and Legislature Size: Evidence from Brazil, dicembre 2016.
- 55. F. Andreoli, E. Peluso, So close yet so unequal: Reconsidering spatial inequality in U.S. cities, febbraio 2017.
- 56. E. Cottini, P. Ghinetti, *Is it the way you live or the job you have? Health effects of lifestyles and working conditions*, marzo 2017.
- 57. A. Albanese, L. Cappellari, M. Leonardi, *The Effects of Youth Labor Market Reforms: Evidence from Italian Apprenticeships*; maggio 2017.
- 58. S. Perdichizzi, Estimating Fiscal multipliers in the Eurozone. A Nonlinear Panel Data Approach, maggio 2017.
- 59. S. Perdichizzi, *The impact of ECBs conventional and unconventional monetary policies on European banking indexes returns*, maggio 2017.
- 60. E. Brenna, Healthcare tax credits: financial help to taxpayers or support to higher income and better educated patients? Evidence from Italy, giugno 2017.
- 61. G. Gokmen, T. Nannicini, M. G. Onorato, C. Papageorgiou, *Policies in Hard Times: Assessing the Impact of Financial Crises on Structural Reforms*, settembre 2017.
- 62. M. Tettamanzi, E Many Pluribus Unum: A Behavioural Macro-Economic Agent Based Model, novembre 2017.
- 63. A. Boitani, C. Punzo, Banks' leverage behaviour in a two-agent New Keynesian model, gennaio 2018.
- 64. M. Bertoni, G. Brunello, L. Cappellari, Parents, Siblings and Schoolmates. The Effects of Family-School Interactions on Educational Achievement and Long-term Labor Market Outcomes, gennaio 2018.
- 65. G. P. Barbetta, G. Sorrenti, G. Turati, Multigrading and Child Achievement, gennaio 2018.
- 66. S. Gagliarducci, M. G. Onorato, F. Sobbrio, G. Tabellini, *War of the Waves: Radio and Resistance During World War II*, febbraio 2018.
- 67. P. Bingley, L. Cappellari, Workers, Firms and Life-Cycle Wage Dynamics, marzo 2018.
- 68. A. Boitani, S. Perdichizzi, *Public Expenditure Multipliers in recessions. Evidence from the Eurozone*, marzo 2018.
- 69. M. Le Moglie, G. Turati, *Electoral Cycle Bias in the Media Coverage of Corruption News*, aprile 2018.
- 70. R. Davidson, A. Monticini, *Improvements in Bootstrap Inference*, aprile 2018.
- 71. R. Crinò, G. Immordino, S. Piccolo, Fighting Mobile Crime, giugno 2018.
- 72. R. Caminal, L. Cappellari, A. Di Paolo, *Linguistic skills and the intergenerational transmission of language*, agosto 2018.
- 73. E. Brenna, L. Gitto, Adult education, the use of Information and Communication Technologies and the impact on quality of life: a case study, settembre 2018.
- 74. M. Bordignon, Y. Deng, J. Huang, J. Yang, *Plunging into the Sea: Ideological Change, Institutional Environments and Private Entrepreneurship in China*, settembre 2018.
- 75. M. Bordignon, D. Xiang, L. Zhan, *Predicting the Effects of a Sugar Sweetened Beverage Tax in a Household Production Model*, settembre 2018.
- 76. C. Punzo, L. Rossi, *The Redistributive Effects of a Money-Financed Fiscal Stimulus*, gennaio 2019.
- 77. A. Baglioni, L. Colombo, P. Rossi, *Debt restructuring with multiple bank relationships*, gennaio 2019.

- 78. E. Cottini, P. Ghinetti, S. Moriconi, *Higher Education Supply, Neighbourhood effects and Economic Welfare*, febbraio 2019.
- 79. S. Della Lena, F. Panebianco, *Cultural Transmission with Incomplete Information: Parental Perceived Efficacy and Group Misrepresentation*, marzo 2019.
- 80. T. Colussi, Ingo E. Isphording, Nico Pestel, *Minority Salience and Political Extremism*, marzo 2019.
- 81. G. P. Barbetta, P. Canino, S. Cima, Let's tweet again? The impact of social networks on literature achievement in high school students: Evidence from a randomized controlled trial, maggio 2019.
- 82. Y. Brilli, C. Lucifora, A. Russo, M. Tonello, *Vaccination take-up and health: evidence from a flu vaccination program for the elderly*, giugno 2019.
- 83. C. Di Novi, M. Piacenza, S. Robone, G. Turati, *Does fiscal decentralization affect regional disparities in health? Quasi-experimental evidence from Italy*, luglio 2019.
- 84. L. Abrardi, L. Colombo, P. Tedeschi, *The Gains of Ignoring Risk: Insurance with Better Informed Principals*, luglio 2019.
- 85. A. Garnero, C. Lucifora, *Turning a Blind Eye? Compliance to Minimum Wages and Employment*, gennaio 2020.
- 86. M. Bordignon, M. Gamalerio, E. Slerca, G. Turati, *Stop invasion! The electoral tipping point in anti-immigrant voting*, marzo 2020.
- 87. D. Vigani, C. Lucifora, Losing control? Unions' Representativeness, "Pirate" Collective Agreements and Wages, marzo 2020.
- 88. S. L. Comi, E. Cottini, C. Lucifora, *The effect of retirement on social relationships: new evidence from SHARE*, maggio 2020.
- 89. A. Boitani, S. Perdichizzi, C. Punzo, *Nonlinearities and expenditure multipliers in the Eurozone*, giugno 2020.
- 90. R. A. Ramos, F. Bassi, D. Lang, Bet against the trend and cash in profits, ottobre 2020.
- 91. F. Bassi, Chronic Excess Capacity and Unemployment Hysteresis in EU Countries. A Structural Approach, ottobre 2020.
- 92. M. Bordignon, T. Colussi, *Dancing with the Populist. New Parties, Electoral Rules and Italian Municipal Elections*, ottobre 2020.
- 93. E. Cottini, C. Lucifora, G. Turati, D. Vigani, *Children Use of Emergency Care: Differences Between Natives and Migrants in Italy*, ottobre 2020.
- 94. B. Fanfani, Tastes for Discrimination in Monopsonistic Labour Markets, ottobre 2020.
- 95. B. Fanfani, The Employment Effects of Collective Bargaining, ottobre 2020.
- 96. O. Giuntella, J. Lonsky, F. Mazzonna, L. Stella, *Immigration Policy and Immigrants' Sleep. Evidence from DACA*, dicembre 2020.
- 97. E. Cottini, P. Ghinetti, E. Iossa, P. Sacco, Stress and Incentives at Work, gennaio 2021.
- 98. L. Pieroni, M. R. Roig, L. Salmasi, *Italy: immigration and the evolution of populism*, gennaio 2021.
- 99. L. Corno, E. La Ferrara, A. Voena, *Female Genital Cutting and the Slave Trade*, febbraio 2021.
- 100. O. Giuntella, L. Rotunno, L. Stella, *Trade Shocks, Fertility, and Marital Behavior*, marzo 2021.
- 101. P. Bingley, L. Cappellari, K. Tatsiramos, *Parental Assortative Mating and the Intergenerational Transmission of Human Capital*, aprile 2021.
- 102. F. Devicienti, B. Fanfani, Firms' Margins of Adjustment to Wage Growth. The Case of Italian Collective Bargaining; aprile 2021.
- 103. C. Lucifora, A. Russo, D. Vigani, *Does prescribing appropriateness reduce health expenditures? Main e\_ects and unintended outcomes*, maggio 2021.

- 104. T. Colussi, The Political Effects of Threats to the Nation: Evidence from the Cuban Missile Crisis, giugno 2021.
- 105. M. Bordignon, N. Gatti, M. G. Onorato, *Getting closer or falling apart? Euro countries after the Euro crisis*, giugno 2021.
- 106. E. Battistin, M. Ovidi, Rising Stars, giugno 2021.
- 107. D. Checchi, A. Fenizia, C. Lucifora, PUBLIC SECTOR JOBS: Working in the public sector in Europe and the US, giugno 2021.
- 108. K. Aktas, G. Argentin, G. P. Barbetta, G. Barbieri, L. V. A. Colombo, *High School Choices by Immigrant Students in Italy: Evidence from Administrative Data*, luglio 2021.
- 109. B. Fanfani, C. Lucifora, D. Vigani, *Employer Association in Italy. Trends and Economic Outcomes*, luglio 2021.
- 110. F. Bassi, A. Boitani, Monetary and macroprudential policy: The multiplier effects of cooperation, settembre 2021.
- 111. S. Basiglio, A. Foresta, G. Turati, *Impatience and crime. Evidence from the NLSY97*, settembre 2021.
- 112. A. Baglioni, A. Monticini, D. Peel, *The Impact of the ECB Banking Supervision Announcements on the EU Stock Market*, novembre 2021.
- 113. E. Facchetti, L. Neri, M. Ovidi, *Should you Meet The Parents? The impact of information on non-test score attributes on school choice*, dicembre 2021.