

Should You Meet the Parents?

The impact of information on non-test score attributes on school choice

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Introduction

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Research question: Does provision of hard-to-find information on **non-test score school attributes** affect parental enrolment decisions?

- Study a context where info on school quality already widespread
- Focus on **high-SES parents**

What we do

- ▶ We exploit a [school choice intervention](#) (**Meet the Parents**) in the London borough of Camden

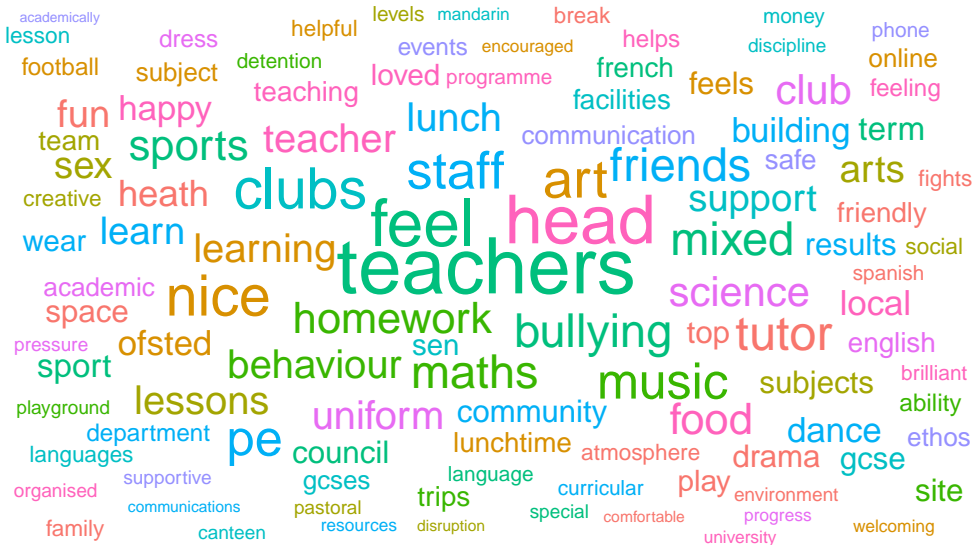
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 - Control group: non-participating schools in Camden & neighbouring districts

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- ▶ Link data on 85 MTP meetings to universe of student administrative records [NPD]
 - Treated group: all pupils in a school-cohort with a MTP meeting
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- ▶ Evaluate the impact of MTP using a [Diff-in-Diff design](#)
 - Outcomes: [sector](#), [preferences](#), and [parental demand for school attributes](#) of the chosen secondary school

What we find

- ▶ The prob. of enrolling at a state-funded rather than private secondary school **increases by 2.4 pp**:
 - 1 more student per school-year opting for the state sector and a 17% reduction of the outflow to the private sector
 - Treatment effects driven by high-SES and high-ability students
 - Parents reconsider the state sector as a whole (effect for participating $\sim 1.4\text{pp}$, not sig.)

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- ▶ Such effects are a **lower bound** of MTP's impact because of competition for local secondary school seats
 - Information spreads to untreated parents
 - Treated parents living in areas with higher exposure to MTP face greater competition for school seats ($\downarrow \sim 1 \text{ p.p.}$)

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 - Treated parents living in areas with higher exposure to MTP face greater competition for school seats ($\downarrow \sim 1$ p.p.)
- ▶ MTP held parental demand for school attributes other than environment constant

Literature and Contribution

- ▶ Effects of information interventions on school choice, mainly on school **performance** and **low-SES households** [Hastings and Weinstein, 2008; Jensen, 2010; Kessel and Olme, 2017; Allende et al., 2019; Burgess and Greaves, 2021]
 - ⇒ Info on **non-test score attributes** in a setting where info on performance is widespread/held constant
 - ⇒ Examine an intervention targeting **high-SES families**
- ▶ **Parental preferences** for schools
 - Parents may not value schools' impact on test scores (Rothstein, 2006)
 - Peer quality, proximity to residence, and long-term student outcomes (Hastings et al., 2009; Burgess et al., 2015; Glazerman and Dotter, 2017; Beuermann and Jackson, 2020; Abdulkadiroglu et al., 2020)
 - Parents prefer schools that improve non-test score long-term outcomes (Beuermann et al., 2023)
 - ⇒ Causal evidence that parents **respond to info on non-test score attributes**
- ▶ Parental **beliefs on school and peer quality** and show that parents' opinions are not fully accurate [Ainsworth et al., 2023; Campos, 2023]
 - ⇒ Parental choices are **not necessarily well-informed** on non-test score attributes.

Background and the MTP Initiative

School choice and the primary to secondary transition

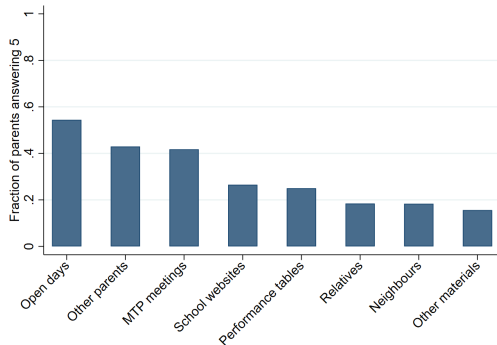
- ▶ **Centralised assignment mechanism:** parents state preferences for schools at the end of primary school
 - Allocation of seats mainly based on home-school distance
 - In London, 70% get first choice; 90% get top 3 choices
 - Private schools: no centralised assignment mechanism
- ▶ Information on school performance and intake characteristics are public and freely available to parents
[Silva et al., 2013; Burgess et al., 2015; Battistin and Neri, Forthcoming]
- ▶ **Secondary schools** are bigger and more diverse than primaries
 - Average home-school distance: 1.9 km vs 0.9 km (160 kids per cohort vs 45)
 - 41% — 61% FSM and non-white in average Camden secondary vs 34% — 50% in participating primaries
- ▶ **Outflow** of kids from borough after attending local primary schools:
 - 10% go to private schools, 25% go to other neighbourhoods
 - Potential consequence: monetary loss for local secondary schools

The Meet the Parents Initiative

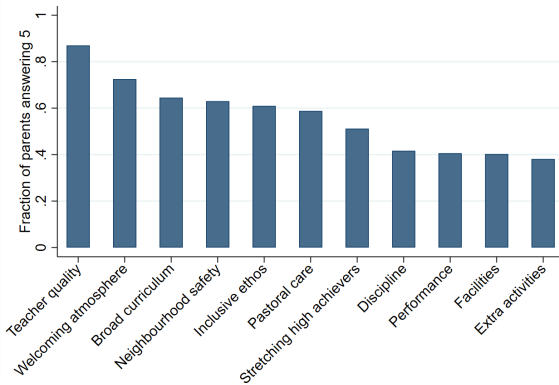
- ▶ MTP started in 2012 and rolled-out in following years [Roll-out](#) [Map](#)
 - **Local schools**: high-performing primaries and low-performing secondaries
 - 56% and 70% of local primary and secondary schools
- ▶ Each primary school hosts 1 meeting per year in September; around 5 secondary schools participate to each meeting
- ▶ 1-hour long meetings between primary and secondary schools parents, guided by a moderator [Pictures](#)
 - **Direct interaction** between primary and secondary school parents and pupils
 - School-specific content, standardised outline:
 - *Why did you choose your secondary school?* - *What do you like about your school?* - *What would you change?*
 - School performance is rarely mentioned at the meetings
 - Info on **school attributes** that parents reportedly value: school environment, lunch breaks, security, discipline, values

Understanding the MTP treatment: sources and attributes

- ▶ Parents report relying on MTP as a **source of information**
- ▶ Parents report to value a broad set of attributes related to the **school environment**



Panel A. Information sources



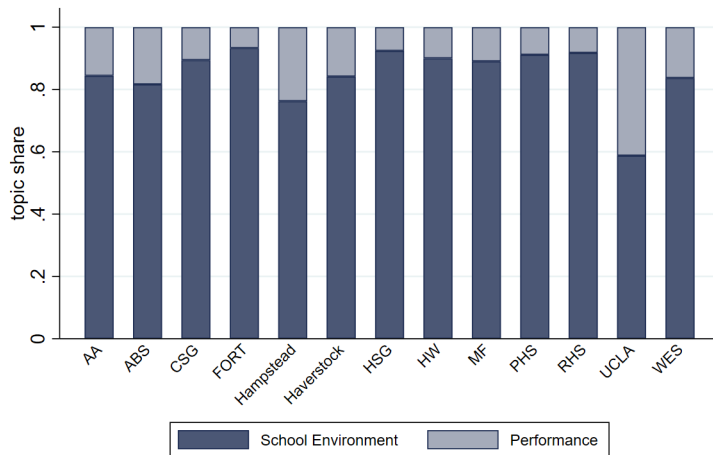
Panel B. School attributes

Source: survey administered to parents attending MTP meetings

[share answers](#)

Understanding the MTP treatment: meeting topics

- ▶ Latent Dirichlet Allocation: meetings' **discussion** focuses on **non-test score** attributes (~ 80%)



Notes: Text analysis from minutes of MTP meetings held between 2014 and 2018

LDA

Manual

Enviro

Performance

Teachers

Data and Empirical Methods

Data

- ▶ **National Pupil Database [2006-2018]**: admin records on the universe of students in state schools
 - 90,000 students per year, 1,800 primary and 510 secondary schools in London
 - Student characteristics, test scores
 - Residence: census block (~ 800 HHs)
- ▶ **Private** school enrolment \equiv not being tracked in secondary school
 - 10% of students leave public education in Camden (close to official figure $\sim 8\%$)
- ▶ **Parental preferences [2014-2018]**: centralised assignment to schools
 - Ranking of preferred schools submitted by parents and school offer
- ▶ **85 MTP Meetings**
 - Date, location and characteristics of the meetings (2012 – 2018)
 - Surveys administered to parents (avg: 15 parents, grades 5 and 6)

Empirical strategy: DiD

- ▶ Compare primary treated schools with untreated schools in Camden and neighbouring districts:

$$Y_i = \alpha_1 MTP_{s(i),t(i)} + X'_{i,t(i)} \zeta + W'_{s(i),t(i)} \delta + \phi_{s(i)} + \phi_{t(i)} + \phi_{l(i)} + e_i$$

- * y_i : outcome of student i in grade 5/6 at primary school s in year t , residing in area l
- * $s(\cdot)$, $t(\cdot)$ and $l(\cdot)$ uniquely map student i to the corresponding school, year, and block
- * MTP equal to 1 if school s hosted an MTP meeting at time t
- * X_i and $W_{s,t}$ are vectors of individual and school
- * ϕ_s , ϕ_l , ϕ_t are school, residence (census block) and year FEs, respectively

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Treatment group:

- ▶ All pupils in a school-cohort with a MTP meeting
- ▶ Identity of participants is not observable
- ▶ 97% parents plan to discuss findings with non-participating peers

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Identifying assumption

- ▶ NO randomization of treated schools
- ▶ Selection of secondary schools into MTP does not pose identification issues quality trends
- ▶ Absent MTP, enrolment changes would have been similar among treated and control schools

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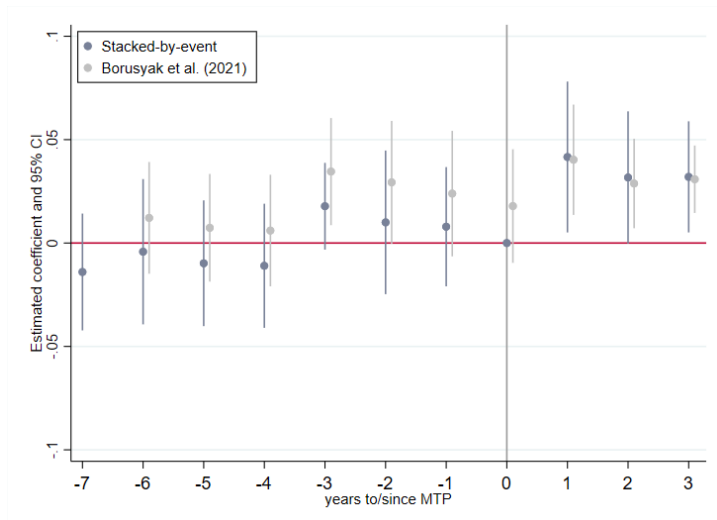
Parallel trends assumption

$$Y_{iw} = \sum_{k=-7}^3 \beta_k MTP_{s(i)} \cdot D_{t(i),w}^k + \sum_{k=-7}^3 \gamma_k D_{t(i),w}^k + \eta_{s(i)} + \eta_{t(i)} + \eta_{l(i)} + v_{iw},$$

- * Generalised DiD with **stacked-by-event design** [Cengiz et al., 2019; Deshpande and Li 2019]
- * Event: date of MTP meeting

Results:
School Choice

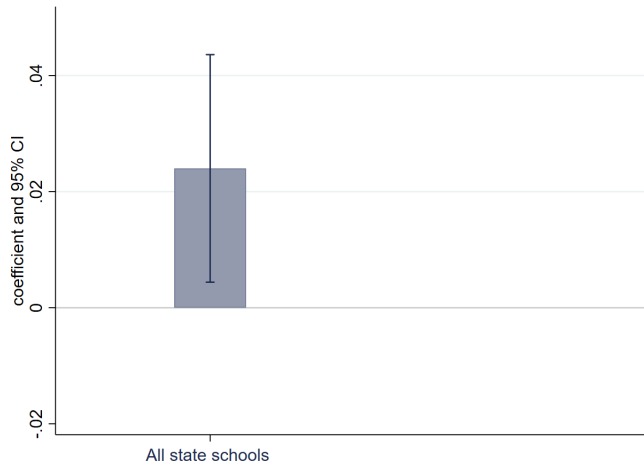
Enrolment: dynamic effects for state-funded schools



Notes: P-values for the joint significance of pre-conversion coefficients are 0.35 (stacked design) and 0.27 (Borusyak et al., 2021)

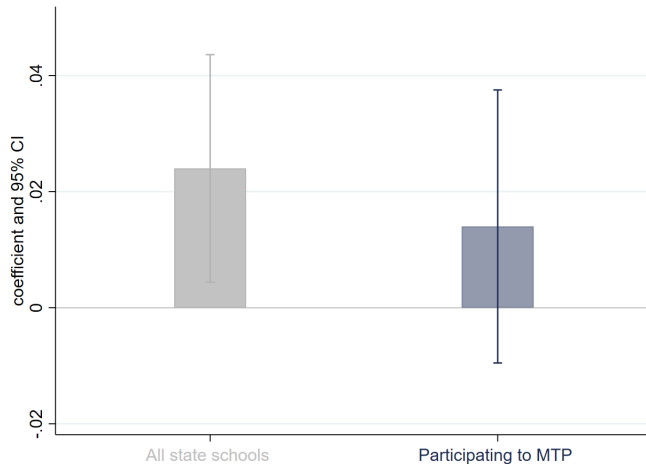
Enrolment: state-funded and participating schools

- ▶ Enrolment in **state-funded** schools increases by 2.4 pp \sim **1 more pupil** per MTP meeting



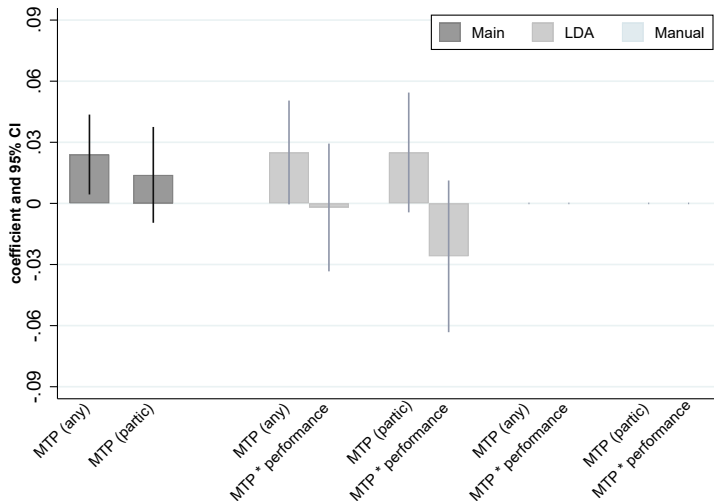
Enrolment: state-funded and participating schools

- ▶ Enrolment in **participating school** increases by 1.4 pp (not significant)



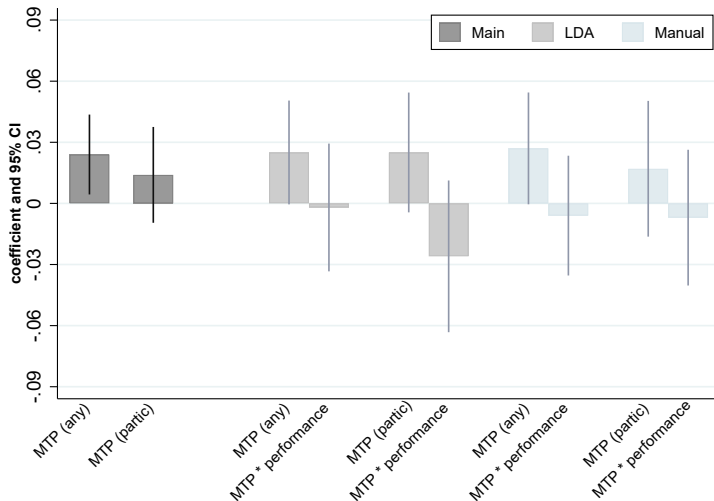
Enrolment: content of MTP meetings

- Enrolment effects are driven by meetings where the discussion focuses on the **school environment**



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Robustness Checks

1. **Assignment to treatment**

Exit of primary schools from MTP might be due to the results of the programme itself [Table](#)

2. **Control group**

Expand the sample to include all students attending any state-funded primary school in London. [Table](#)

3. **Treatment group (1)**

Exclude early (pilot) meetings held in one school [Table](#)

4. **Treatment group (2)**

Test the assumption that each entire cohort of students is exposed to the treatment irrespective of actual participation [Table](#)

5. **Stacked-by-meeting design**

Test that results are robust to considering only the schools participating in the single meeting to which a student is exposed [Table](#)

Results:

Competition and Information Effects

Direct and indirect effects of MTP: Estimation

- ▶ Examine whether MTP generates **spillovers through geographical proximity** to treated parents
- ▶ Living in a block with a higher share of treated parents may affect enrolment outcomes via two different channels:
 - ⇒ Spread of **information** about participating institutions [social interactions] (↑) vs greater **competition** (↓)
- ▶ **Intensity of exposure** to treatment for student i as the share of students *directly* exposed to MTP in her block:

$$MTP_{I(i)} = \frac{\sum_j MTP_j \cdot \mathbb{1}[I(j) = I(i)]}{\sum_j \mathbb{1}[I(j) = I(i)]}$$

- ▶ We estimate spillover effects through the following specification:

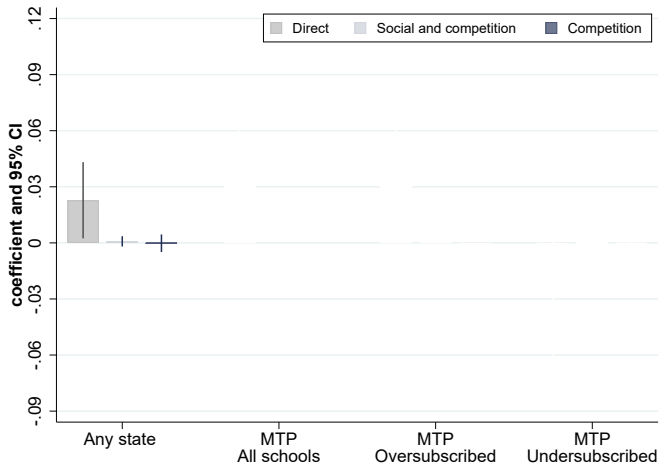
$$Y_i = \tau_1 MTP_{s(i), t(i)} + \tau_2 MTP_{I(i), t(i)} + \tau_3 MTP_{s(i), t(i)} \cdot MTP_{I(i), t(i)} + \eta_{s(i)} + \eta_{t(i)} + \eta_{I(i)} + \varepsilon_i$$

Where:

- * τ_1 : *direct* effect of MTP on treated parents in hypothetical areas where no other parent is treated
- * τ_2 : *indirect* effect of MTP for **untreated parents**
- * τ_3 : *indirect* effect of MTP for **treated parents**

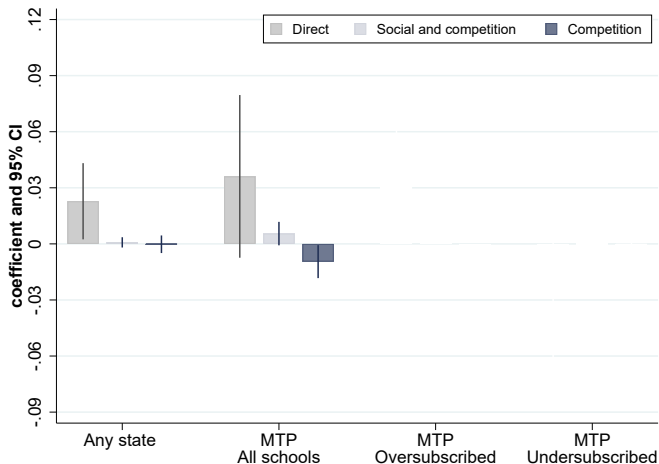
Direct and Indirect Effects of MTP: Results

- Competition does not bind in the public sector as a whole since a state school seat is guaranteed by law



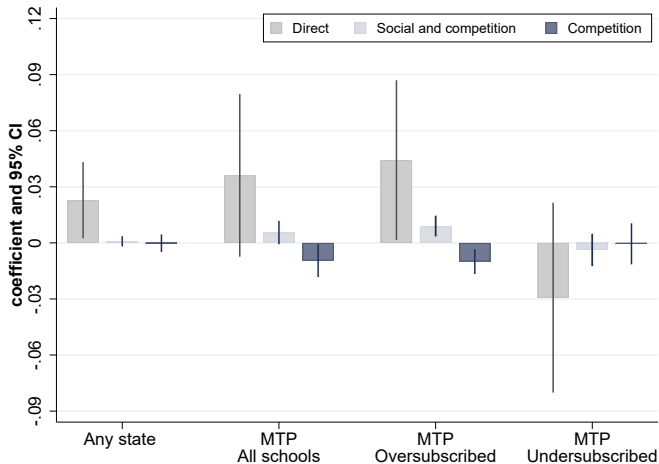
Direct and Indirect Effects of MTP: Results

- ▶ 1σ higher exposure to treated peers in the neighbourhood:
 - Untreated parents: increases enrollment at participating schools by about 0.55 pp
 - Treated parents: decreases enrollment at participating schools by 0.95 pp



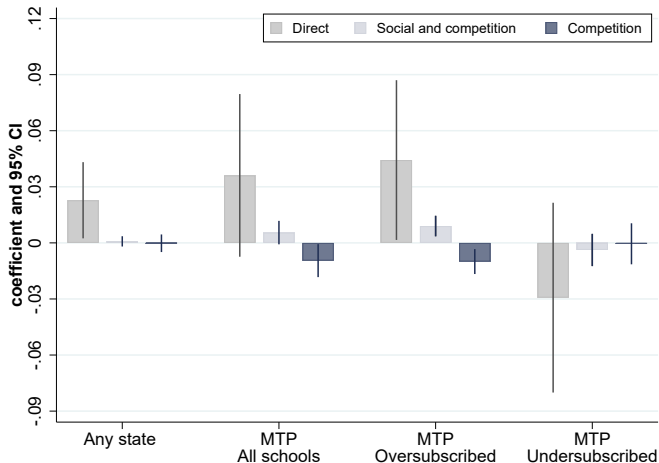
Direct and Indirect Effects of MTP: Results

- ▶ As expected, competition binds only at oversubscribed schools



Direct and Indirect Effects of MTP: Results

- Assume treated parents are **not additionally affected** by the spread of information from other treated neighbours:
 - 1σ higher exposure to treated peers \Rightarrow \uparrow enrollment of untreated parents at participating schools by $0.55 + 0.95 = 1.5$ pp



Results:

Parental demand for school attributes

Revealed Preferences for School Attributes: Estimation

- ▶ Study how MTP interacts with **parental demand** for school attributes (e.g., proximity, student composition)
- ▶ We build a dataset at the student-secondary-school level to mimic the **choice problem** faced by parents
- ▶ Estimate the following specification:

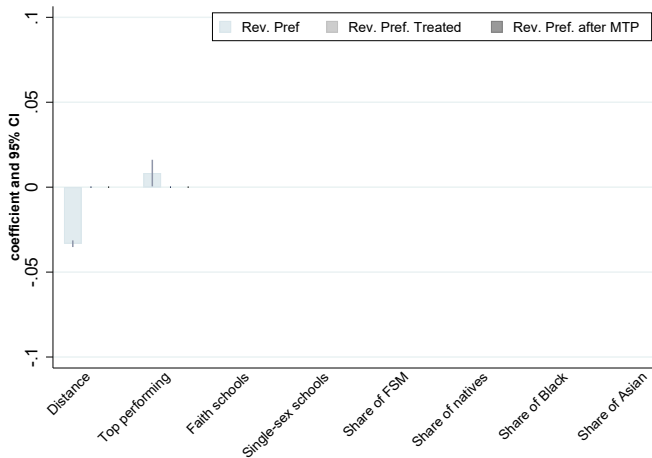
$$Y_{ip} = \sum_{k=1}^K \omega_k W_p^k + \sum_{k=1}^K \pi_{0k} MTP_{s(i)} \cdot W_p^k + \sum_{k=1}^K \pi_{1k} MTP_{s(i), t(i)} \cdot W_p^k + \phi_{s(i)} + \phi_{t(i)} + \phi_{l(i)} + u_{ip},$$

Where:

- * Y_{ip} : student i 's enrollment at/preference rank for secondary school p
 - * ω_k : parental utility weights for school attribute k in control schools
 - * π_{0k} : differential utility weights of parents in MTP schools *before* the intervention
 - * π_{1k} : extra weights among parents driven by the MTP intervention
- ▶ MTP does not influence the number of schools ranked

Revealed Preferences for School Attributes: Results

- Parents prefer **closer** (1km $\uparrow \Rightarrow$ 3.5pp less likely to enroll), **high-performing** schools (\uparrow 1.5pp)

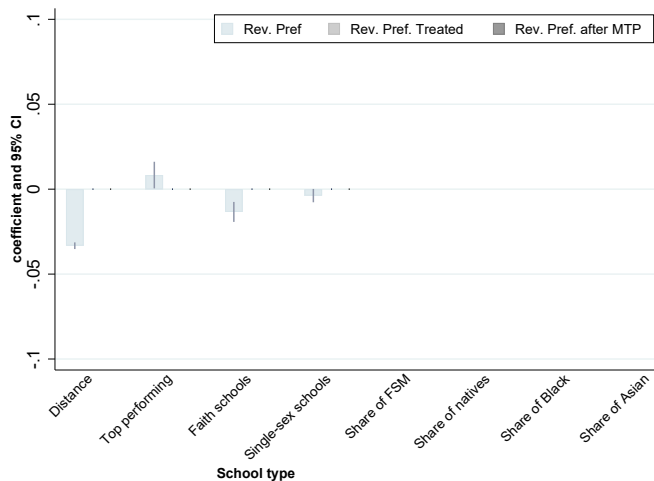


ranked first

full rank

Revealed Preferences for School Attributes: Results

- Parents are less likely to choose **faith** and **single-sex** schools (\uparrow 1.1 – 1.3pp)

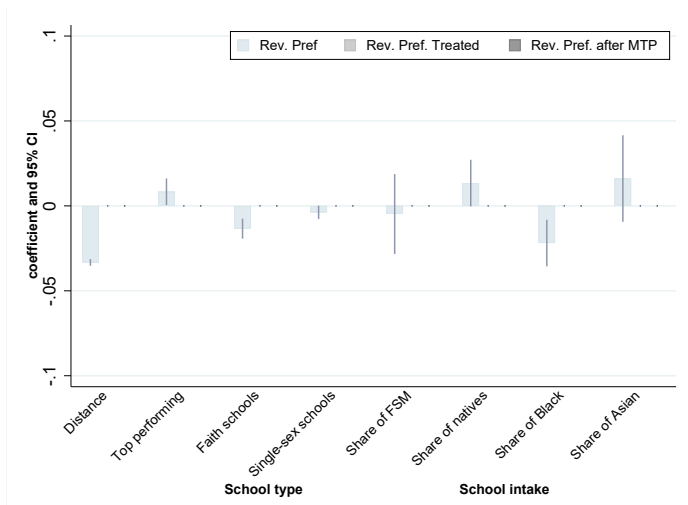


ranked first

full rank

Revealed Preferences for School Attributes: Results

- Parents are less likely to choose socio-economically diverse schools $\uparrow 20\%FSM/black \Rightarrow \downarrow 0.7 - 1.6pp$

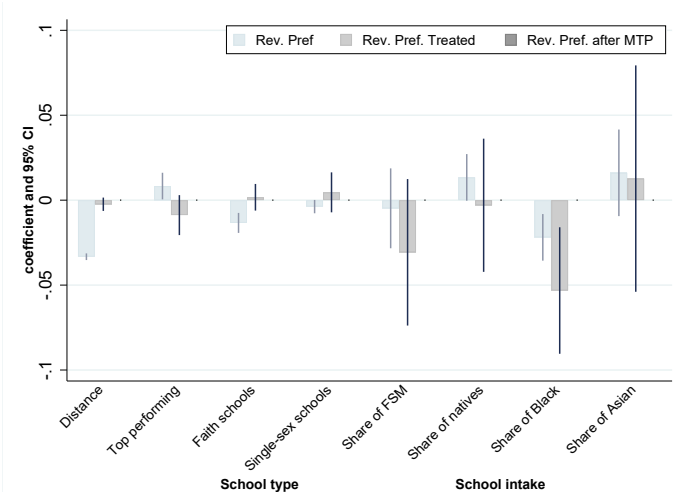


ranked first

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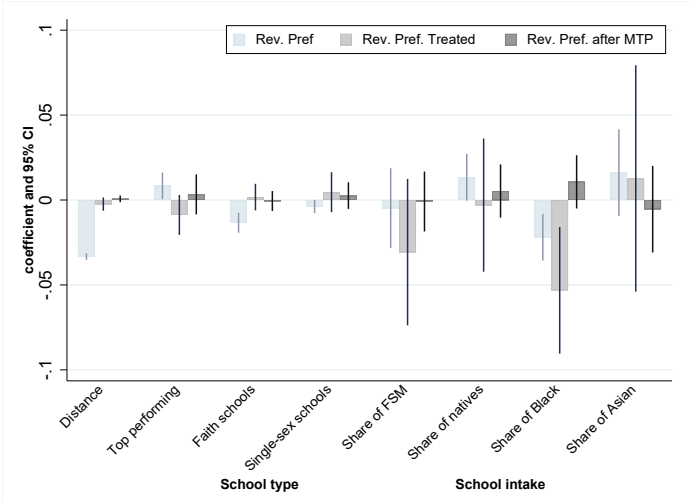
Revealed Preferences for School Attributes: Results

- Parents targeted by MTP exhibit **stronger preference for peer quality** *before* the intervention.



Revealed Preferences for School Attributes: Results

- ▶ MTP held parental preferences for attributes other than the school environment **constant**



Conclusions

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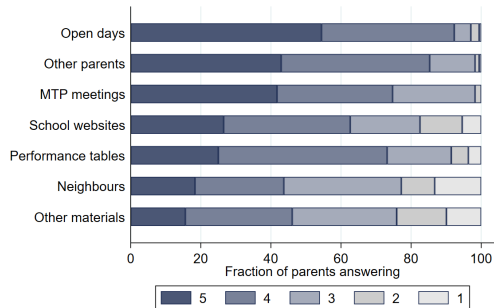
- ▶ MTP provides hard-to-find information that shift parental decisions
 - Parents react to (so-far overlooked) information on [school values](#) & [environment](#)
- ▶ [Low cost](#), [effective](#) intervention:
 - [Net financial benefits](#) for local secondary schools \sim £318,945 [Table](#)
 - [Welfare](#) and [scaling up](#) effects depend on the general equilibrium effects
- ▶ Can help [contrast](#) adverse consequences of outflow from state sector:
 - Decrease in resources available as more children opt for private ed. [Jackson et al., '16; Gibbons et al., '17]
 - Change in composition as high-SES students opt out [Altonji et al., '15]
- * [Potential long-term effects](#):
 - Educational and labor market effects for treated and public sector students

Thank you!

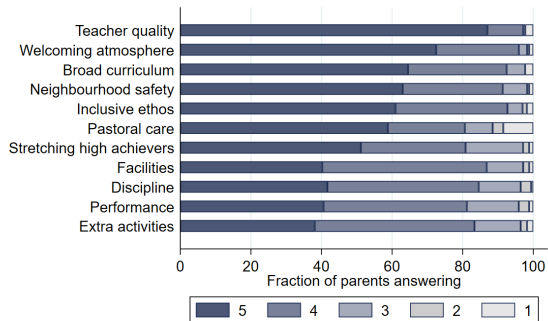
lorenzo.neri@st-andrews.ac.uk

Appendix

Frequency Distribution of Survey Responses



Panel A. Information sources



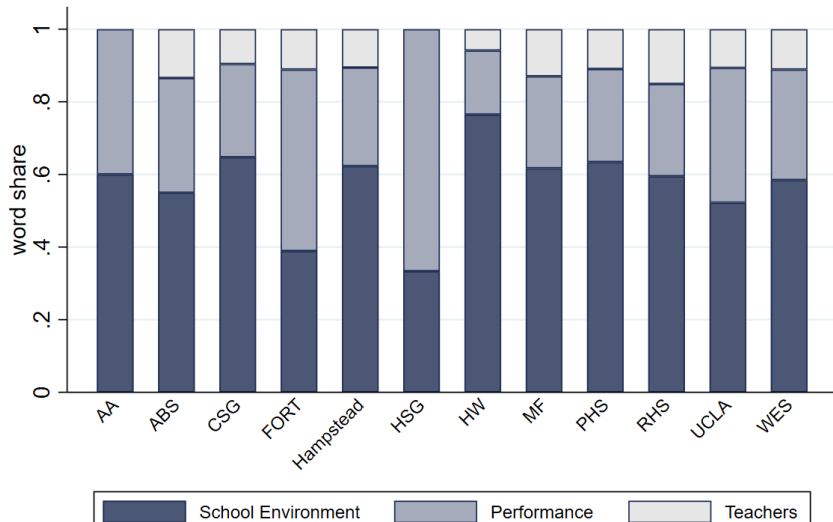
Panel B. School attributes

Meeting topics using Latent Dirichlet Allocation

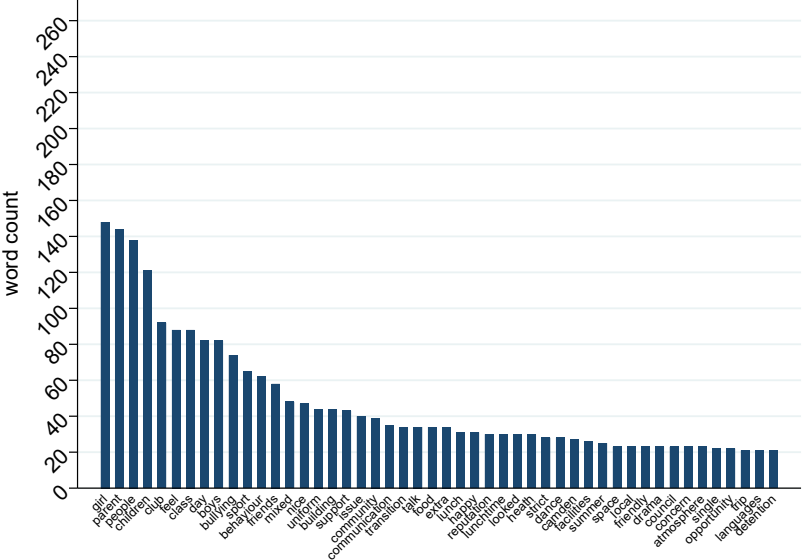
Topic (1)	Topic share (2)	Most frequent words (3)	Label (4)
1	0.04	music (0.0152), house (0.0143), languages (0.0139), french (0.0106), heath (0.0101), band (0.0088), forms (0.0078), mandarin (0.0068), walk (0.0059), half (0.0056), express (0.0055), standard (0.0054), playground (0.005), rugby (0.005), dept (0.0045)	Environment
2	0.05	british (0.0077), stopped (0.006), tutoring (0.0057), team (0.0054), mentor (0.0054), pupil (0.005), nurturing (0.0047), exam (0.0047), visited (0.0044), stuff (0.0038), sister (0.0038), jobs (0.0038), friendly (0.0038), library (0.0035), backgrounds (0.0035)	Environment
3	0.05	struggling (0.0079), play (0.0064), relationship (0.0061), brilliant (0.0042), basketball (0.0041), family (0.0038), visit (0.0036), easily (0.0036), football (0.0035), performances (0.0032), japanese (0.003), moving (0.003), roundhouse (0.003), lunchtime (0.0029), heard (0.0029)	Environment
4	0.05	girls (0.0476), academic (0.0211), pupils (0.0196), dress (0.0141), code (0.0114), location (0.0067), daughter (0.0065), confident (0.0057), cuts (0.0054), fair (0.0054), feminist (0.0053), months (0.0048), staff (0.0047), dance (0.0044), events (0.0042)	Environment
5	0.04	ofsted (0.0251), gender (0.0121), dance (0.0107), discipline (0.0087), range (0.0083), child (0.0074), base (0.0073), fewer (0.0068), concern (0.0065), wide (0.0065), diversity (0.0065), disruption (0.0059), progress (0.0059), arts (0.0051), easier (0.0046)	Environment
6	0.50	school (0.1041), teachers (0.0354), people (0.019), lots (0.017), parents (0.017), head (0.0167), students (0.0157), time (0.012), feel (0.0117), system (0.0115), clubs (0.0114), bullying (0.0105), boys (0.0103), behaviour (0.0101), children (0.0098)	Environment
7	0.07	daughter (0.0304), schools (0.0292), looked (0.021), teacher (0.0207), child (0.0181), private (0.0163), local (0.0117), kids (0.0105), impressed (0.0078), friends (0.0073), feeling (0.0065), contact (0.0064), primary (0.0062), happy (0.006), chose (0.0059)	Environment
8	0.08	girls (0.0422), homework (0.032), nice (0.0203), class (0.0176), people (0.0163), boys (0.0133), tutor (0.0132), heath (0.0099), email (0.0094), allowed (0.0094), camden (0.0091), single (0.0086), term (0.0082), dance (0.0076), child (0.0071)	Performance
9	0.06	learning (0.0339), sets (0.0181), ofsted (0.012), report (0.0109), house (0.0094), university (0.0087), engineering (0.0063), trip (0.0061), lecture (0.0058), life (0.0058), level (0.0058), spend (0.0057), mandarin (0.0056), team (0.005), punishment (0.005)	Performance
10	0.06	strong (0.0193), student (0.0161), students (0.0159), english (0.0102), ability (0.0101), stronger (0.0097), form (0.007), class (0.0056), sets (0.005), issue (0.0049), setting (0.0049), challenged (0.0048), poor (0.0046), break (0.0046), people (0.0044)	Performance

Meeting topics using the manual allocation

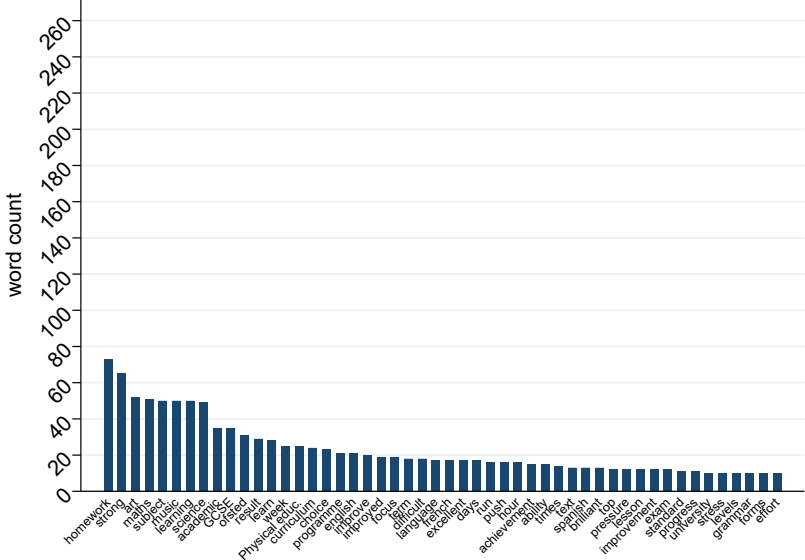
- On average, 57% of words relate to the school environment at participating schools



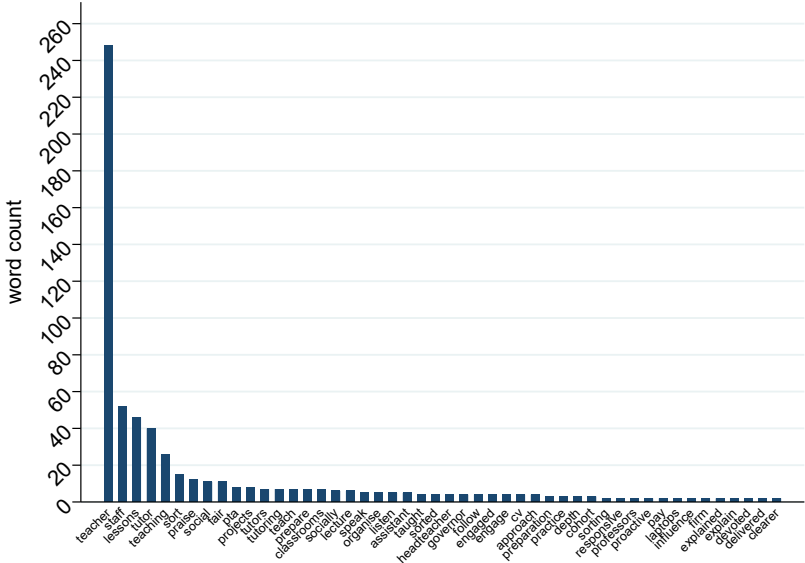
Most-mentioned words on the school environment



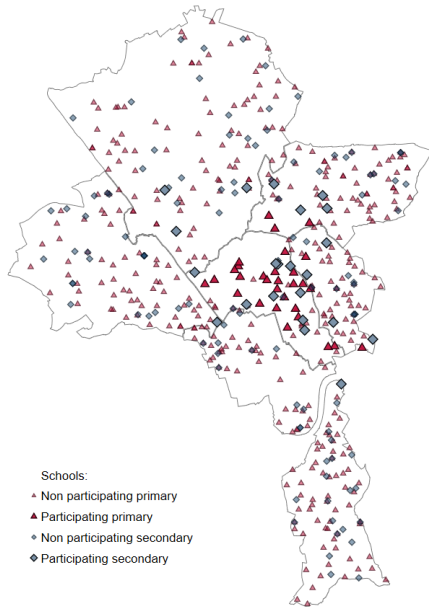
Most-mentioned words on school performance



Most-mentioned words on teachers



Map of MTP schools



Timing of MTP rollout

Figure: Primary schools

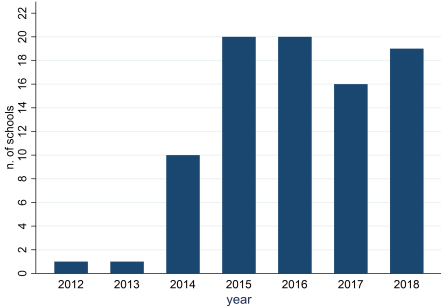
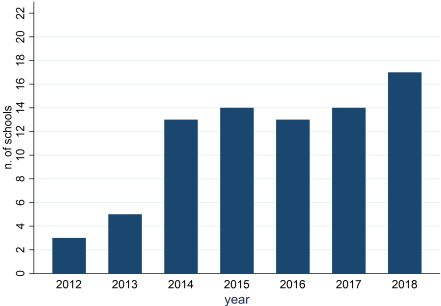


Figure: Secondary schools



- ▶ 24 primary schools (60% of Camden primary schools)
- ▶ 17 secondary schools (70% of Camden secondary schools)

Meet the Parents Initiative



Meet the Parents Initiative

Figure: Secondary schools panel



Figure: Primary school audience



School-level descriptives

	Primary schools			Secondary schools		
	Host schools	Non-host schools in Camden	Non-host schools in bordering LAs	Participating schools	Non-participating schools in Camden	Non-participating schools in bordering LAs
	(1)	(2)	(3)	(4)	(5)	(6)
% Free school meal eligible	0.34 (0.168)	0.448 (0.166)	0.301 (0.165)	0.388 (0.142)	0.616 (0.257)	0.334 (0.179)
% With special education needs	0.26 (0.089)	0.412 (0.288)	0.319 (0.189)	0.255 (0.078)	0.781 (0.439)	0.398 (0.307)
% White	0.508 (0.184)	0.334 (0.181)	0.39 (0.226)	0.388 (0.155)	0.389 (0.212)	0.361 (0.203)
% Native speaker	0.603 (0.205)	0.426 (0.173)	0.566 (0.218)	0.507 (0.183)	0.552 (0.263)	0.516 (0.212)
End of school score in English (std)	0.188 (0.366)	-0.139 (0.421)	-0.081 (0.427)	0.09 (0.436)	-0.61 (2.228)	0.112 (0.746)
End of school score in math (std)	0.157 (0.32)	-0.123 (0.414)	-0.042 (0.439)	0.12 (0.376)	-0.648 (1.982)	0.2 (0.805)
Average school-home distance (km)	0.816 (0.351)	0.862 (0.473)	0.964 (0.413)	1.972 (0.791)	3.413 (0.595)	2.724 (1.608)
Enrolment count per grade	39.627 (13.632)	29.29 (16.481)	46.077 (22.182)	162.719 (42.019)	52.277 (86.998)	141.186 (80.652)
Observations	30	17	377	22	4	108

Sample Descriptives

	Students in treated schools		Students in control schools	
	mean (1)	S.D. (2)	mean (3)	S.D. (4)
Panel A: Enrollment sample				
Participating secondary	0.718	0.450	0.155	0.362
State-funded secondary	0.857	0.350	0.900	0.300
Distance to secondary school (km)	1.759	4.501	2.452	3.422
Female	0.492	0.500	0.492	0.500
Free school meal eligible	0.345	0.475	0.317	0.465
Special Education Needs	0.258	0.437	0.299	0.458
Native speaker	0.607	0.488	0.566	0.496
White	0.509	0.500	0.392	0.488
Asian	0.161	0.367	0.167	0.373
Black	0.170	0.376	0.246	0.431
Changed residence during KS2	0.250	0.433	0.282	0.450
KS2 test score in mathematics (std)	0.119	0.965	-0.013	1.017
KS2 test score in reading (std)	0.191	0.972	-0.018	1.020
Distance to primary school (km)	0.879	0.843	1.002	0.926
Income deprivation index (LSOA level)	0.401	0.184	0.403	0.212
Observations (2007-2013)	9,438		98,943	
Panel B: Preference sample				
Any preference for state-funded school	0.982	0.131	0.971	0.167
Accepted an offer in any state funded school	0.704	0.457	0.798	0.402
N. ranked schools	3.716	1.692	3.474	1.777
Any preference for participating school	0.959	0.199	0.403	0.49
Accepted an offer in a participating school	0.59	0.492	0.139	0.346
First preference for a participating school	0.763	0.426	0.157	0.364
Observations (2014)	797		11,826	

MTP meetings by hosting and participating schools' test scores

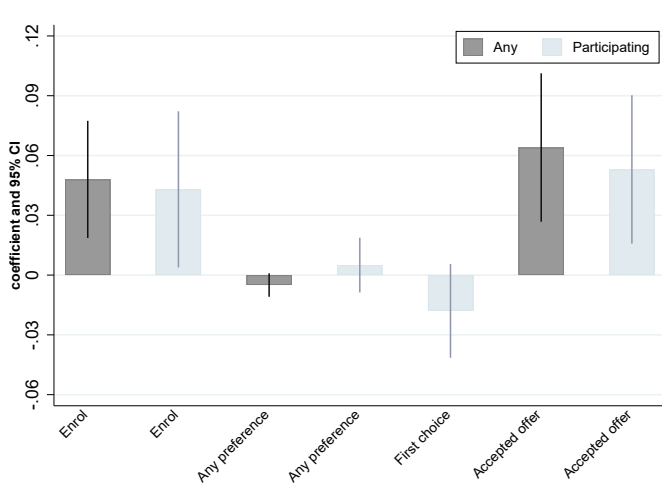
<i>Participating secondary school test scores</i>	<i>Host primary school test scores</i>			
	1st tercile	2nd tercile	3rd tercile	
1st tercile	20	19	10	49
2nd tercile	13	20	13	46
3rd tercile	13	18	12	43
	46	57	35	138

Selection of participating secondary schools into MTP

Dep. Var.: Participation to MTP	Characteristics:		
	Level (baseline)	2007-2012	2010-2012
	(1)	(2)	(3)
% Free school meal eligible	-0.104 (0.082)	-0.001 (0.069)	-0.022 (0.059)
% White	-0.118 (0.090)	-0.080 (0.073)	0.022 (0.043)
% Asian	-0.046 (0.070)	0.046 (0.066)	0.079 (0.071)
% Black	-0.136 (0.098)	-0.011 (0.030)	0.032 (0.022)
% Native speaker	-0.075 (0.037)	0.099 (0.064)	0.040 (0.063)
End of school score in English (std)	-0.004 (0.070)	0.002 (0.054)	0.018 (0.037)
End of school score in mathematics (std)	-0.054 (0.067)	0.062 (0.085)	0.058 (0.051)
Observations	82	68	72
Fixed effects	LA	LA	LA

School preferences

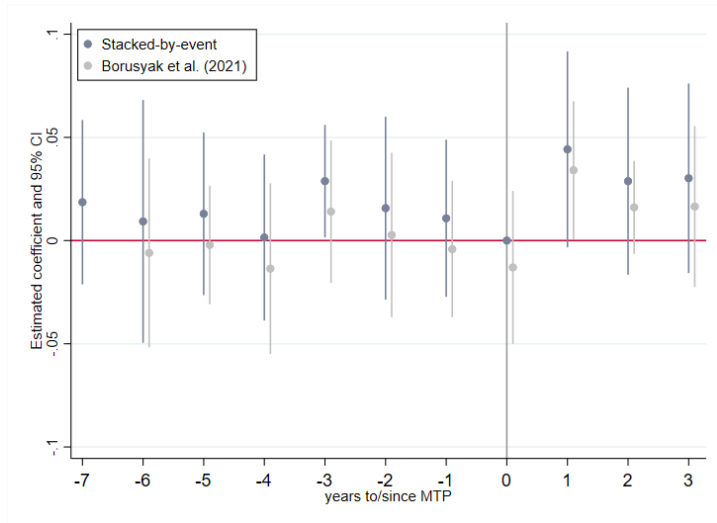
- ▶ MTP does not change the probability of *ranking* a state school ('any preference'), but **increases the likelihood** of *accepting* a **state school offer** ('accepted offer') by **5 – 6 pp ~ 8%**



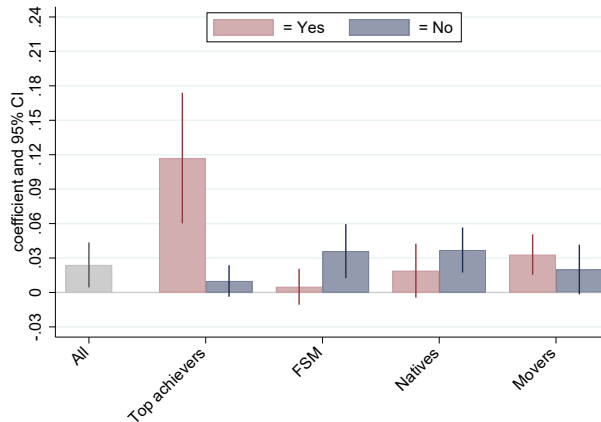
Main results

	Dependent variable: Enrollment indicator at secondary school		
	(1)	(2)	(3)
Panel A: State schools			
T	-0.057*** (0.018)		
MTP	0.034** (0.017)	0.025** (0.010)	0.024** (0.010)
Panel B: Participating schools			
T	0.157*** (0.036)		
MTP	0.050** (0.021)	0.015 (0.013)	0.014 (0.012)
Observations	180,398	180,398	180,398
Year, Census block FE	Y	Y	Y
Primary school FE	N	Y	Y
Individual and primary school controls	N	N	Y

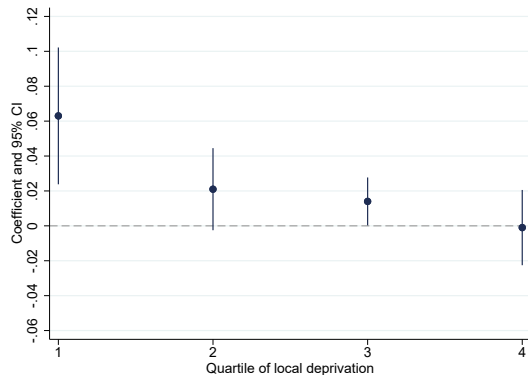
Enrolment: dynamic effects for participating schools



Enrolment: heterogeneous effects for state-funded schools

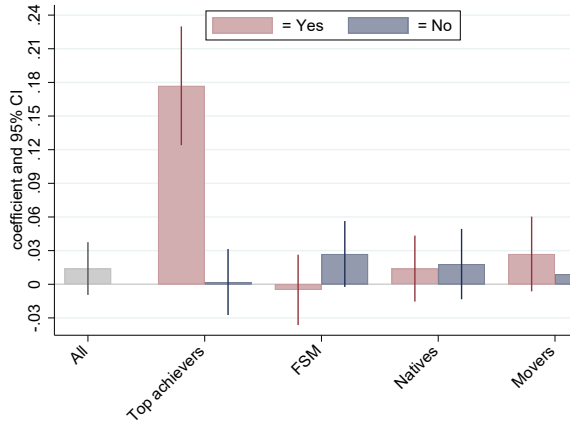


Panel A. Individual characteristics

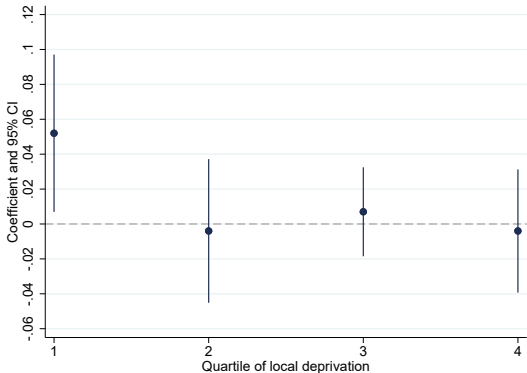


Panel B. Local area deprivation

MTP effects on enrollment at participating schools

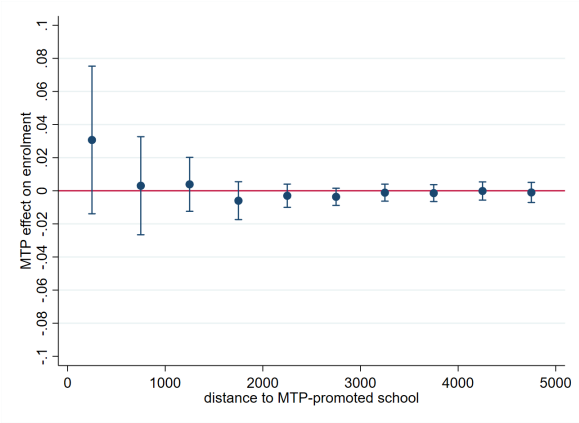


Panel A. Individual characteristics

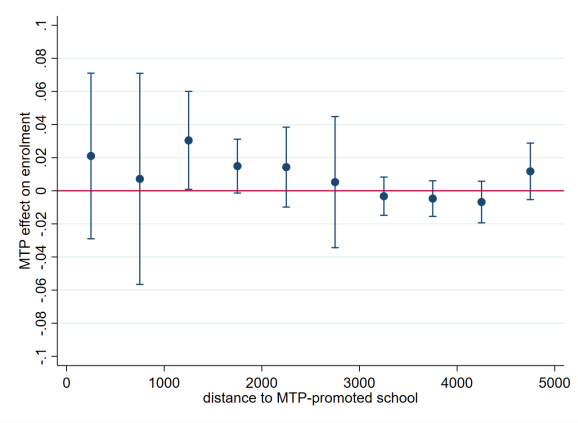


Panel B. Local area deprivation

MTP effect by distance to school



Panel A. Participating schools



Panel B. Oversubscribed participating schools

Direct and indirect effects of MTP

	Dependent variable: enrolment indicator at secondary school		
	All schools (1)	Oversubscribed schools (2)	Undersubscribed schools (3)
Panel A. State-funded schools			
MTP	0.0228** (0.0104)	0.0302 (0.0248)	-0.0302 (0.0248)
MTPI	0.0008 (0.0014)	0.0056 (0.0035)	-0.0056 (0.0035)
MTP*MTPI	-0.0002 (0.0024)	-0.0056 (0.0042)	0.0056 (0.0042)
Panel B. Participating schools			
MTP	0.0361 (0.0222)	0.0443** (0.0218)	-0.0293 (0.0259)
MTPI	0.0055* (0.0032)	0.0090*** (0.0028)	-0.0038 (0.0044)
MTP*MTPI	-0.0095** (0.0045)	-0.0100*** (0.0034)	-0.0005 (0.0056)
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

Revealed Preferences for School Attributes: Conceptual Framework

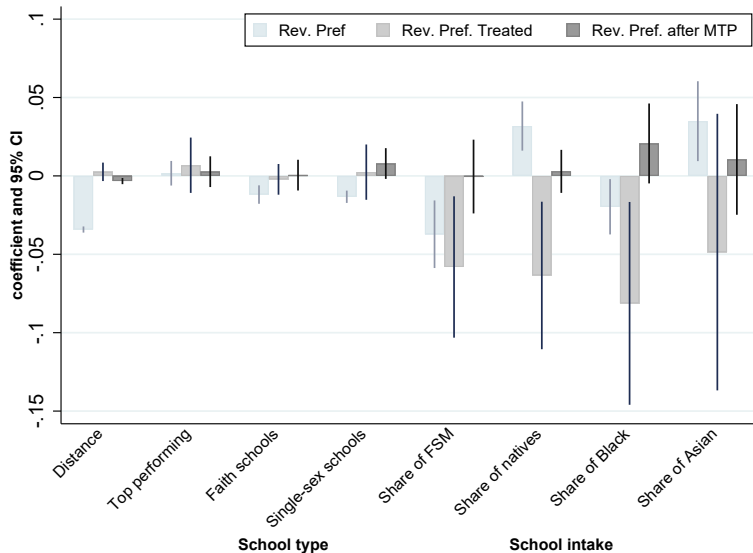
- ▶ Parent i chooses the secondary school j that maximizes her utility function (U_{ij}) [Hastings et al., 2010]:

$$U_{ij} = \beta_i^q \bar{Q}_{ij} + \bar{X}_{ij}' \beta_i^x + \beta_i^e \bar{E}_{ij} - C_j + v_{ij}$$

Where:

- * Q_j denotes school academic performance
 - * X_j is a vector of school characteristics such as peer socio-economic composition and distance
 - * E_j summarizes a bundle of non-test score characteristics
 - * Private schools charge tuition fees that enter utility as pecuniary cost C_j ; $C_j = 0$ at state schools.
 - * v_{ij} is an idiosyncratic component.
- ▶ β_i^k represents parent's preference weight for attribute k ; upper bars denote parental beliefs about school attributes.
 - ▶ Parents choose the highest-utility school available, i.e. choose institution j if $U_{ij} > U_{ik}, \forall k \in J_i$
 - ▶ Interpret the effect of MTP as updating parental beliefs on non-test score attributes E_j

Revealed preferences for school attributes: top ranked



Revealed preferences for school attributes: full ranking

Dep. Var.: preference indicator for secondary school:	First choice	Second choice	Third choice	Fourth choice	Fifth choice	Sixth choice
	(1)	(2)	(3)	(4)	(5)	(6)
Distance (in km)	-0.0342*** (0.001)	-0.0547*** (0.002)	-0.0678*** (0.002)	-0.0752*** (0.002)	-0.0792*** (0.002)	-0.0821*** (0.002)
MTP_i * Distance (in km)	0.0026 (0.003)	0.0023 (0.004)	0.0001 (0.004)	-0.0010 (0.004)	-0.0015 (0.004)	-0.0018 (0.004)
MTP_i,t * Distance (in km)	-0.0033** (0.001)	-0.0035 (0.002)	-0.0036 (0.002)	-0.0025 (0.003)	-0.0022 (0.003)	-0.0016 (0.002)
Top performing	0.0017 (0.004)	0.0019* (0.006)	0.0180** (0.007)	0.0213** (0.008)	0.0227*** (0.008)	0.0234*** (0.008)
MTP_i * Top performing	0.0068 (0.009)	0.0229 (0.019)	0.0365 (0.028)	0.0397 (0.030)	0.0401 (0.031)	0.0379 (0.031)
MTP_i,t * Top performing	0.0027 (0.005)	-0.0095 (0.012)	-0.0251 (0.018)	-0.0310* (0.018)	-0.0362* (0.020)	-0.0384* (0.020)
Faith	-0.0119*** (0.003)	-0.0283*** (0.005)	-0.0423*** (0.007)	-0.0516*** (0.007)	-0.0574*** (0.008)	-0.0613*** (0.008)
Single sex	-0.0133*** (0.002)	-0.0285*** (0.003)	-0.0406*** (0.004)	-0.0476*** (0.004)	-0.0524*** (0.004)	-0.0552*** (0.004)
MTP_i * Faith	-0.0022 (0.005)	-0.0020 (0.008)	-0.0023 (0.009)	-0.0020 (0.010)	-0.0018 (0.011)	-0.0011 (0.011)
MTP_i * Single sex	0.0024 (0.009)	0.0044 (0.018)	0.003 (0.025)	0.0074 (0.026)	0.0101 (0.026)	0.0116 (0.026)
MTP_i,t * Faith	0.0005 (0.005)	0.0049 (0.028)	0.0068 (0.009)	0.0102 (0.010)	0.0095 (0.009)	0.0107 (0.008)
MTP_i,t * Single sex	0.0079 (0.005)	0.0190* (0.010)	0.0316** (0.014)	0.0330** (0.015)	0.0360** (0.016)	0.0358** (0.016)
Share of FSM	-0.0372*** (0.011)	-0.0613*** (0.016)	-0.0819*** (0.019)	-0.0996*** (0.021)	-0.1123*** (0.021)	-0.1207*** (0.022)
Share of natives	0.0318*** (0.008)	0.0667*** (0.013)	0.0840*** (0.016)	0.0913*** (0.018)	0.0938*** (0.019)	0.0923*** (0.019)
Share of Black	-0.0197*** (0.009)	-0.0204 (0.014)	-0.0223 (0.019)	-0.0207 (0.022)	-0.0186 (0.023)	-0.0166 (0.024)
Share of Asian	0.0349*** (0.013)	0.0605*** (0.021)	0.0757*** (0.026)	0.0852*** (0.030)	0.0920*** (0.031)	0.0945*** (0.032)
MTP_i * Share of FSM	-0.0581*** (0.023)	-0.0979*** (0.031)	-0.1296*** (0.042)	-0.1265*** (0.047)	-0.1240*** (0.050)	-0.1214*** (0.052)
MTP_i * Share of natives	-0.0635*** (0.024)	-0.1044*** (0.033)	-0.1340*** (0.045)	-0.1375*** (0.050)	-0.1356** (0.053)	-0.1334** (0.055)
MTP_i * Share of Black	-0.0813** (0.033)	-0.1569*** (0.050)	-0.2107*** (0.067)	-0.2374*** (0.071)	-0.2549*** (0.072)	-0.2686*** (0.072)
MTP_i * Share of Asian	-0.0486 (0.045)	-0.1127 (0.073)	-0.1577 (0.103)	-0.1685 (0.115)	-0.1739 (0.120)	-0.1748 (0.123)
MTP_i,t * Share of FSM	-0.0004 (0.012)	-0.0004 (0.019)	-0.0089 (0.027)	-0.0201 (0.030)	-0.0251 (0.031)	-0.0358 (0.031)
MTP_i,t * Share of natives	0.0029 (0.007)	-0.0062 (0.009)	-0.0077 (0.009)	-0.0102 (0.011)	-0.0081 (0.011)	-0.0047 (0.012)
MTP_i,t * Share of Black	0.0207 (0.013)	0.0258 (0.022)	0.0275 (0.031)	0.0299 (0.032)	0.0259 (0.033)	0.0253 (0.034)
MTP_i,t * Share of Asian	0.0105 (0.018)	0.0202 (0.031)	0.0402 (0.042)	0.0527 (0.048)	0.0603 (0.052)	0.0647 (0.053)
Observations	1,231,184	1,231,184	1,231,184	1,231,184	1,231,184	1,231,184

Intention To Treat (ITT) estimates

Dependent variable: Enrollment indicator at secondary school			
	(1)	(2)	(3)
Panel A: State schools			
T	-0.059*** (0.019)		
MTP	0.035** (0.017)	0.024** (0.010)	0.021** (0.009)
Panel B: Participating schools			
T	0.153*** (0.036)		
MTP	0.056** (0.021)	0.018 (0.013)	0.016 (0.012)
Observations	180,398	180,398	180,398
Year, Census block FE	Y	Y	Y
Primary school FE	N	Y	Y
Individual and primary school characteristics	N	N	Y

Alternative Control and Treatment Group

	Dependent variable: enrolment indicator at secondary school			
	Control: All London		Treatment: No Pilot School	
	(1)	(2)	(3)	(4)
MTP	0.033*** (0.010)	0.031*** (0.010)	0.025** (0.010)	0.024** (0.01)
MTP	0.028** (0.012)	0.027** (0.012)	0.013 (0.013)	0.012 (0.012)
Observations	1,070,291	1,070,291	180,284	180,284
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	N	Y	N	Y

Effects by parental participation

Dependent variable:	Enrollment at state schools			Enrollment at participating schools		
	(1)	(2)	(3)	(4)	(5)	(6)
MTP	0.030*** (0.011)	0.028*** (0.011)	0.037 (0.037)	0.017 (0.013)	0.015 (0.013)	0.023 (0.035)
MTP * High parental participation	-0.018 (0.011)			-0.009 (0.016)		
MTP * High parental participation (share)		-0.010 (0.014)			-0.003 (0.016)	
MTP * N. of participating secondaries			-0.003 (0.008)			-0.002 (0.008)
Observations	180,398	180,398	180,398	180,398	180,398	180,398
Year, Census block FE	Y	Y	Y	Y	Y	Y
Primary school FE	Y	Y	Y	Y	Y	Y
Individual and primary school characteristics	Y	Y	Y	Y	Y	Y

Stacked-by-meeting design: average effect

Dependent variable: Enrollment indicator at secondary school			
	(1)	(2)	(3)
Panel A: State schools			
MTP	0.010 (0.010)	0.018* (0.010)	0.018* (0.010)
Panel B: Participating schools			
MTP	0.009 (0.006)	0.011* (0.006)	0.011* (0.006)
Observations	754,844	749,551	749,551
Event time, Year, Census block FE	Y	Y	Y
Primary school FE	Y	Y	Y
Individual and primary school characteristics	N	Y	Y
Meeting FE	N	N	Y

Cost-Benefit Analysis

Benefits	
Per-pupil school funding	6,913
<i>One additional student per meeting ($N = 85$)</i>	587,605
Costs	
School non-fixed running costs	1,520
<i>One additional student per meeting ($N = 85$)</i>	129,200
Meeting participation fee	380
<i>$N = 367$ school/meeting combinations</i>	139,460
Net benefits	318,945