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Abstract

This paper uses data from the Longitudinal Study of Young People in England (LSYPE) to investigate how the educational aspirations of secondary school pupils in Year 9 (at age 14) and in Year 11 (at age 16) are influenced by their school peers. Educational aspirations are defined as plans to stay in education after completing compulsory schooling and, conditional on staying, intentions to follow an academic rather than a vocational post-compulsory pathway. In order to overcome the endogeneity and selection biases associated with peer effects, the study adopts an identification strategy based on 'peers-of-peers'. Specifically, each individual's secondary school peers are instrumented with their primary school peers who did not attend the same primary or secondary school as the individual. These peers-of-peers will have affected the secondary school peers through attendance at the same primary school, but have likely never met the individual and therefore will not have had any direct effect on the individual's aspirations. The paper assesses peer effects in three different ways: through peers' ability (as measured by their educational achievements); through peers' socio-economic background; and through peers' own aspirations. Peer effects on individuals' intentions to stay in education are found to be significant for boys but not for girls. Conditional on their plans to remain in post-compulsory education, peers' ability, socio-economic background and aspirations to follow an academic rather than a vocational education pathway, all have a positive and significant effect on individuals' aspirations to follow an academic route. We also find evidence that the provision of information, advice and guidance (IAG) by schools or external agencies can serve to mitigate peer effects. Finally, individuals with higher ability and more socially-advantaged peers are less likely to have changed their educational aspirations between Year 9 and Year 11 of schooling..

JEL Classification: I20, J24

Keywords: Peer effects, Educational aspirations, Instrumental variables

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1 Introduction

The effects of peers on individuals' behaviour and outcomes have long been of interest in social sciences. Likewise, the factors that influence the education participation decisions of young people are of great importance for policy makers and other stakeholders, as well as being of concern to parents and the individuals themselves. The aim of this paper is to bring these two areas together in order to investigate the influence of school peers on individuals' post-compulsory education participation decisions. In particular, we examine the role that secondary school peers play in influencing the future educational aspirations of pupils before they complete their compulsory schooling.

The importance of peer effects in education arises from the multiplier effects that may be generated from student interactions. If a pupil's peers can have a causal impact on their outcomes, then decisions concerning class composition can affect the education production function and, in aggregate, potentially impact on macroeconomic growth ([Sojourner, 2013](#); [Hoxby, 2000](#)). On the other hand, if peer-group quality impacts on an individual's achievements, then sorting across schools by prior ability could exacerbate educational inequalities, and consequently reinforce existing disadvantage.

Although not irreversible, the decisions that young people make regarding their future education tend to have significant effects on the rest of their lives. These will include both economic outcomes (such as wages and employment) and non-economic outcomes (for example, health). Much academic study has investigated the influences on educational participation decisions, with prior attainment and socio-economic background receiving most attention. Clearly, if peer influences are an important factor in determining outcomes, then parents, teachers and policy makers will all be interested in the magnitude, composition and determinants of these peer effects ([Sacerdote, 2011](#)).

According to [Manski \(1993\)](#), individuals belonging to the same peer group tend to behave similarly for three different reasons: 'endogenous effects', where the propensity of an individual to behave in some way varies with the behaviour of the group; 'exogenous effects', where the propensity of an individual to behave in some way varies with the exogenous characteristics of the group; and 'correlated effects' whereby individuals in the

same group tend to behave similarly because they have similar characteristics or face similar institutional environments.

The baseline model for estimating peer effects is the linear-in-means model. The model associates an individual's outcomes with their own characteristics and the average characteristics of their peers. From an empirical point of view, the baseline model has two fundamental shortcomings in measuring peer effects. First, it is often difficult to separate the effect that the peer group has on the individual from the effect the individual has on the group. Because outcomes are simultaneous, an individual will affect their peers as much as their peers affect them (the so-called 'reflection problem'). Second, peer groups are seldom randomly compiled. Rather, they are typically, at least to some degree, self-selected. This self-selection into peer groups can generate effects unobserved to the researcher which are correlated with peer characteristics. Thus in the presence of self-selection, it is difficult to distinguish peer effects from selection effects (de Xavier Pinto, 2010; Robertson and Symons, 2003). If individuals self-select into groups, then selection bias would arise from the fact that an outcome which appeared to be a peer effect is really just a consequence of the fact that people who act in a similar ways or who share similar characteristics make themselves into groups. As Hoxby (2000) explained, if every individual in a group appears to be high achieving then selection bias could arise when an observer assumes that achievement is an effect of being in that group instead of a reason for being in it.

This paper uses data from the Longitudinal Study of Young People in England (LSYPE) to investigate the effect of secondary school peers on individuals' preliminary (Year 9, at age 14) and later (Year 11, at age 16) educational participation aspirations. Educational aspirations are defined here as intending to stay in full-time education after completing compulsory schooling and, conditional on staying, planning to follow either an academic or a vocational pathway.

There are three main contributions of this paper to the existing literature. First, the paper adopts a novel 'peers-of-peers' identification strategy to overcome the possible endogeneity encountered in the analysis of peer groups (Mendolia et al., 2018). Information on the primary school peers of an individual's secondary school peers who attended a different primary and secondary school from the individual of interest is used to instrument the

peer effects. The idea is that these peers-of-peers could not have directly affected the individual's aspirations since they have never been in the same school with the individual. Second, the majority of recent studies on peer effects in education have been almost exclusively concerned with educational achievements. What makes this paper distinct from previous studies is that it is focused on the effects of peers on individuals' *aspirations* and *intentions*, rather than on their achievements. These are crucially important in understanding the mechanisms underlying the education production function. Third, the paper estimates peer effects in three different ways: through peers' average achievements; through the proportion of peers with parents in the highest socio-economic groups; and, for the first time, through peers' own aspirations.

In addition to these contributions, the paper adds to the existing literature on peer effects in the UK by providing evidence from LSYPE. Unlike the majority of previous studies for the UK which used the limited information that is available in the National Pupil Database (NPD) and Annual School Census, the LSYPE dataset contains very rich information about the individuals, their family background and composition, and their schools.

Our findings suggest that peer effects have an important role to play in influencing individuals' aspirations at age 16 whether to stay in education after the end of compulsory schooling. Peers' ability and socio-economic background, as well as their aspirations to follow an academic rather than a vocational route, have a positive and significant effect on both girls' and boys' aspirations to follow an academic pathway. We also find that the provision of information, advice and guidance (IAG) by school teachers and, in particular, by external agencies can serve to mitigate any peer effects - IAG appears to substitute for the influence of peers on individuals' aspirations. Finally, the study finds that individuals with higher ability and more socially-advantaged peers are less likely to have changed their aspirations between Year 9 and Year 11 (final year) of compulsory schooling.

The remainder of this paper is structured as follows. In the next section we briefly review the relevant literature on peer effects in education. Section 3 provides information on the English education system and Section 4 explains our identification strategy. Section 5 describes the data and the peer indicators. Section 6 presents the main empirical results. Finally, Section 7 concludes.

2 Peer effects in education

Controlling for the selection of students into peer groups is an important step in being able to correctly identify peer effects (Sacerdote, 2011). Based on the pioneering work of Manski (1993), there is a large literature that presents estimates of the nature and size of peer effects while addressing the difficulties in identifying the parameters of the linear-in-means model. Researchers have utilised a variety of econometric methods to overcome the endogeneity and the selection problems which would otherwise lead to biased estimates (Cooley, 2014).

One approach for identifying peer effects in higher education is the random assignment of roommates in college dormitories. This addresses the issue of endogenous sorting. Examples include the studies of Sacerdote (2001); Zimmerman (2003); Stinebrickner and Stinebrickner (2003); Foster (2003); Carrell et al. (2009) amongst others. The papers of Sacerdote (2001) and Zimmerman (2003) received considerable attention due to the general difficulty of finding credible exogenous variation in peer quality. Both studies found positive peer effects on a student's first year grade performance. However, the evidence they provide is limited and is sensitive to sample modifications or alternative specifications. For example, while Zimmerman (2003) found that students' first year grades are influenced by their roommates' *verbal* Scholastic Aptitude Test (SAT) score, they found no evidence that their grades are positively correlated with their roommates' *total* SAT score.

The random allocation of students has not been adopted in studies of peer effects on school level achievements because of the difficulty in finding evidence of random allocation within schools. For school pupils, several studies have adopted a fixed-effects technique by applying school, teacher, pupil, school-year and school-by-grade fixed effects. The basic concept of these studies is that by applying fixed-effects in the estimation, the selection effects are removed and this allows the researcher to identify peer effects from idiosyncratic variation in peer ability within groups (Sacerdote, 2011). An example is the study of Hanushek et al. (2003) who used data from Texas and controlled for fixed pupil and school-by-grade effects to show that peers' achievements have a positive effect on individuals' grades and

that this remained constant across quartiles of the grade distribution. Several other papers have also adopted this approach. For example, [Betts and Zau \(2004\)](#) examined the impact of classroom and grade level peer achievement on elementary students' achievements using a detailed panel dataset from San Diego Unified School District. The authors employed pupil-level fixed-effects to control for positive tracking of students into classes and found positive and significant peer effects.

Several authors have attempted to solve the reflection problem by designing instruments for peers' behaviour that are assumed to be exogenous. The biggest concern for researchers following this approach is the validity of the instruments as it is difficult to guarantee that they are correlated with the peer variables but uncorrelated with the structural errors ([Lin, 2010](#)). For example, [Rivkin \(2001\)](#) who used the county group or metropolitan area characteristics as instruments for school level data and analysed peer group effects on high school achievements concluded that aggregation tends to move estimates further from their true values and that this therefore raises doubts about the benefits of aggregation as a method to reduce endogeneity bias.

[Goux and Maurin \(2007\)](#) used students' date of birth within the year as a determinant of early school performance of French children and which was assumed to be exogenous to the quality of their neighbourhood. They found that children living in a neighbourhood with a relatively high proportion of children born at the beginning of the year perform significantly better than children living in a neighbourhood with a relatively high proportion of children born at the end of the year. Further, [de Xavier Pinto \(2010\)](#) instrumented peer quality with the student allocation in classrooms in Brazil to find that peer effects are positive for students in the last year of primary school and that student test scores increase with peer quality for average and high quality students.

[Fertig \(2003\)](#) used data from PISA 2000 and instrumented the coefficient of variation of peers with variables measuring whether a school selects students upon entry and whether the schools are in the private or public sector. The author reported that for US students the peer group composition is a strong predictor of individual achievement and also indicated that the greater the heterogeneity of achievement in a student's school, the lower is the individual performance. Other studies include [Lefgren \(2004\)](#) who used data from Chicago

public schools and used the variation in class setting policies as instruments arguing that this decision is school level and unrelated to student characteristics but does alter the pupil composition of classes. The author found peer effects to be quite small but generally positive and significant.

The majority of the existing literature on peer effects in education focuses on the influence of peers on individuals' achievements. There are a few studies which examined peer effects beyond achievements. An example is the study of [Poldin et al. \(2015\)](#) who used data on undergraduate students of a Russian university to find that specialisation subject choice is significantly influenced by friends and study partners. Also, [Ashworth and Evans \(2001\)](#) showed that female students were more likely to study economics when there is a critical mass of women studying the subject. Other studies investigating peer effects in education with outcomes other than school achievements, include [De Giorgi et al. \(2009\)](#), [Sacerdote \(2001\)](#) and [Lyle \(2007\)](#) who examined peer effects on the choice of college majors. Further, [Rivkin \(2001\)](#) examined peer effects on high school continuation and high school non-participation. [Mendolia et al. \(2018\)](#) estimated the effect of high school peers on the likelihood to go to university and, subsequently, on the probability of attending a prestigious university in England. [Evans et al. \(1992\)](#) and [Gaviria and Raphael \(2001\)](#) examined peer effects on school drop out decisions.

It is evident from the studies reviewed above that peer effects, and particularly school-level peer effects, vary considerably between countries. In part, this may be because educational systems are different. For example, some countries track students into differing-ability schools, while others keep their entire school system comprehensive. Some give students (or rather, their parents) the chance to select their school, although others do not. The existing literature based on British data mostly uses data collected from the NPD and School Annual Census which both contain very limited information on pupils' background characteristics, and mainly focusses on the impact of peers on pupils' achievements. [Gibbons and Telhaj \(2016\)](#) and [Lavy et al. \(2012\)](#) exploit the change in peers from primary to secondary school and both find no evidence of significant peer effects for secondary school students at the mean peer quality. However, [Lavy et al. \(2012\)](#) found significant and sizeable negative peer effects from peers at the very bottom of the ability distribution

but little evidence that average peer quality and very good peers significantly affect pupils' achievements. [Gibbons and Telhaj \(2016\)](#) concluded that peer effects exist but make a relatively small contribution to the variation in academic progress. [Bradley and Taylor \(2004\)](#) restricted their sample to students who changed school during the last two years of compulsory schooling since these pupils also changed their peer group. They found positive peer effects which were generally stronger for low and middle ability pupils than for high ability pupils. However, as [Mendolia et al. \(2018\)](#) note, pupils who change school may be systematically different from those who do not change school, especially when the reasons for the change can be related to school achievement, and hence it may be difficult to generalise these findings.

There are also a few studies which estimate peer effects using longitudinal datasets. [Robertson and Symons \(2003\)](#) used the National Child Development Study (NCDS) cohort, who were born in 1958, to examine peer effects on Maths and English test score improvements from age 7 to age 11. The authors measured the influence of the peer group by the percentage of the child's classmates who have fathers in the top socio-economic groups when aged 7 and controlled for selection bias by instrumenting the peer group effect with the individual's region of birth. The authors found strong evidence for the importance of peer groups. [Atkinson et al. \(2008\)](#) used a panel of English pupils to look at the effect of the introduction of teachers' performance related pay. Conditioning on school and teacher fixed-effects applied on a subset of schools that is argued to have random allocation of pupils, the authors found significant and non-trivial peer effects within the classroom.

Finally, the recent studies of [Mendolia et al. \(2018\)](#) and [Speckesser and Hedges \(2017\)](#) are the closest methodologically to the present study. [Mendolia et al. \(2018\)](#), particularly, used the LSYPE dataset to examine school-level peer effects on GCSE and A level scores and on university attendance. They found that the average ability of peers has a moderate positive effect on GCSE and A level scores and that being in a school with a large proportion of low-quality peers can have significantly detrimental effects on individual achievements. Further, the authors found that peers' ability has stronger effect on students at the bottom of the grade distribution at age 16. [Speckesser and Hedges \(2017\)](#), adopting the same

methodology as [Mendolia et al. \(2018\)](#), used English data from the NPD and Annual School Census to investigate peer effects on the decision to pursue an academic or vocational track after completing compulsory schooling. The authors found that individuals with peers achieving higher scores were less likely to choose a vocational track.

Table 1 below summarises the main studies of peer effects in education using British data.

Table 1: Summary of key studies using British data

Study	Identification	Dataset	Outcome	Peer effect
Robertson and Symons (2003)	Instrumental Variables	NCDS	Maths and reading improvement	Positive
Bradley and Taylor (2004)	Random Assignment	NPD, Annual School Census	KS3, KS4 scores	Positive
Atkinson et al. (2008)	School and Teacher Fixed Effects, Instrumental Variables	NPD, Annual School Census	KS3, GCSE scores	Positive
Lavy et al. (2012)	Fixed Effects	NPD, Annual School Census	KS3 scores	Positive for heterogeneous outcomes
Gibbons and Telhaj (2016)	Instrumental Variables	NPD, Annual School Census	KS3 scores	Insignificant
Speckesser and Hedges (2017)	Instrumental Variables	NPD, Annual School Census	Academic Choice	Positive
Mendolia et al. (2018)	Instrumental Variables	LSYPE	GCSE, A level scores, University Attendance	Positive

This paper contributes to, and advances, the extant literature in a number of ways. First, we use matched survey (LSYPE) and administrative (NPD and Annual School Census) data to provide detailed information on pupils background, prior attainment, choices and attitudes, as well as the achievements of their peers at various stages in their education. We use the fact that we know both the primary and secondary schools attended to identify peers-of-peers in order to isolate exogenous variation in the peer group. Finally, we examine the impact of peers on pupils' intentions and aspirations. Clearly, while peer groups can directly impact aspirations and attitudes, actual educational outcomes may deviate from these due to many other influences.

3 Institutional Background

In England, the school curriculum is organised in blocks of years called Key Stages (KS). The curriculum is the same for all pupils until Year 11 (age 16) but then gives way to a stratified system where pupils have to select between primarily an academic or a vocational route or, prior to recent policy changes, to leave education and enter the labour market.¹ Pupils are assessed in standard national tests at the end of each KS and progress through the phases is measured in terms of KS Levels. Students enter school at age 5 in the Foundation Stage, then move to KS1 at ages 5-7. At the age of 7 students move to KS2 (although usually remaining in the same school). At the end of KS2, at age 11, children leave the primary phase and move to secondary education with a change of school, where they progress through KS3 until age 14. At KS2 and (for the LSYPE cohort) KS3, students are tested in three core subjects, Maths, Science and English². Finally, students progress through KS4 until age 16 when they take the General Certificate of Secondary Education (GCSE) which used to coincide with the end of compulsory schooling.

The Local Educational Authorities (LEAs) are responsible for organising the admission policies for primary and secondary schools. Following the Education Reform Act of 1988 the admission to both primary and secondary schools is guided by the principle of parental choice and pupils can apply to a number of different schools and attend any under-subscribed school regardless of where they live. This system replaced the previous assignment of pupils to schools primarily on the basis of residence and the allocation of central government funding to schools by the LEAs. State schools cannot select pupils on the basis of their ability.

Most households can choose between a number of schools and, on average, pupils of the same age who live in the same Output Area (OA) (a geographic neighbourhood comprising an average of 125 households and 5 pupils of the same age group), attend two or three different secondary schools (Gibbons et al., 2013). A typical English secondary school is attended by students living in around 60 different OAs, meaning that students come from

¹Recently the compulsory education participation age rose to 18 but students still have to decide whether they will follow an academic or a vocational route from age 16. This change occurred after our cohort reached age 16 and so did not affect them.

²There are now no national tests at the end of KS3, though this happened after our cohort was in KS3.

a range of family backgrounds. Further, students are grouped with different peers for different subjects and therefore they tend to interact with most of the other students in the same secondary school year group. Finally, there is often a subject-specific allocation of students according to their ability level, especially for GCSE classes, although not all schools set by ability ([Atkinson et al., 2008](#)).

4 Data

4.1 Description of the Dataset

The data are drawn from the LSYPE provided by the UK Department for Education (DfE). LSYPE follows the lives of a sample of individuals born in 1989-90 and provides detailed information on the key factors affecting the educational progress and attainment of the cohort members and their transitions following the end of compulsory schooling. The survey began in 2004 and comprised an initial sample of 15,770 individuals in Year 9 (age 14), with clustering at school level in the sample design. Following the initial survey, the cohort members were surveyed each year until 2010, when they were aged 20, and for a final interview in 2015, when aged 25. In addition to the young people themselves, their parents or guardians were also interviewed in the first four waves of the survey in order to acquire more detailed background information on the individuals' family background and their households. The cohort members have been linked to the National Pupil Database (NPD) which is a longitudinal administrative dataset recording the population of all school and college pupils in England throughout their schooling years and provides detailed information on their test scores and exam results alongside basic pupil characteristics, such as gender and ethnicity, and school information. This linking of the LSYPE dataset to the NPD is crucial for this study as it enables information to be gathered on pupils' test scores at ages 11 (KS2) and age 14 (KS3) as well as information on their former primary and their secondary schools.

The sample used in this study comprises 7,938 pupils who have at least one secondary school peer and at least one peer-of-peer, as well as having non-missing information on educational aspirations reported at age 14 and age 16 and other information including

demographics, family background and composition, and primary and secondary school characteristics including test scores at KS2 and KS3. The estimating sample did not differ significantly from the full sample in terms of background characteristics. Approximately 91% of the sample attended government comprehensive schools while 9% attended voluntary-aided or controlled schools, usually schools with a religious denomination. The pupils in the sample attended 533 different secondary schools, and had attended 3,445 different primary schools.

4.2 Peer Groups

The students in English secondary schools are grouped with different peers for different subjects and consequently they interact with most other students in their year group attending the same school. Therefore, the secondary school peer group of each individual includes all other students in that year attending the same school³.

Each LSYPE individual has a secondary school peer group which varies from 1 to 35 pupils observed in LSYPE. The average observed secondary school peer group of each LSYPE individual consists of 15 pupils. Their peers originate from between 2 to 23 different primary schools. The majority of secondary schools included pupils from between 7 to 14 different primary schools. Peers-of-peers are defined as pupils who went to the same primary school as individual i 's secondary school peers, but a different primary school, and secondary school, to individual i . Table 2 below shows that over 77% of the individuals have a peers-of-peers group of 4 or more pupils who are observed in LSYPE.

4.3 Variables

Dependent Variables

To study the influence of secondary school peers on individuals' educational aspirations, the future intentions of the LSYPE sample have been examined at two different time points. This enables us to observe both their preliminary and their final aspirations, and

³While it is acknowledged that peer effects might be stronger from interactions with close friends than from the overall school group, unfortunately the data do not allow us to identify friendships between the LSYPE individuals.

Table 2: Peers-of-peers Group Size

Number of peers-of-peers	% of LSYPE individuals
1 peer of peer	11
2-3 peers of peers	12
4-5 peers of peers	10
6-8 peers of peers	11
9-11 peers of peers	12
12-15 peers of peers	11
15+ peers of peers	33
Total	100

how these changed over the last two years of compulsory schooling. First, the individuals' *preliminary aspirations* were recorded when they were attending Year 9 of compulsory schooling at age 14. Then, their *later aspirations* were recorded when they were in Year 11 - the final year of compulsory schooling - at age 16.

Educational aspirations are measured in two ways. First, individuals are asked about their intentions to stay in full-time (FT) education or to leave education after completing compulsory education at age 16. Second, for those who are intending to stay in FT education, they are asked about their plans, choosing between attending a school 'sixth form' or a college of Further Education (FE). In England, whilst you can still study for academic qualifications at an FE college, the courses offered there tend to be more vocationally orientated as compared to school sixth forms which offer a range of more academically focused subjects. Consequently, the individuals who mentioned a sixth form have been considered as aspiring to an academic route while those who mentioned an FE college have been considered as aspiring to a vocational route. Table 3 below provides the descriptive statistics for the four dependent variables.

Table 3: Descriptive Statistics for Dependent Variables

Educational Aspirations	Mean	Std. Dev.
Preliminary Aspirations (age 14)		
A1: Stay in FT education	0.91	0.29
A2: Academic route <i>conditional on aspiring to stay</i>	0.74	0.44
Later Aspirations (age 16)		
A3: Stay in FT education	0.91	0.29
A4: Academic route <i>conditional on aspiring to stay</i>	0.70	0.46

All variables are dichotomous. The alternative categories are: for aspirations A1 and A3: Leave FT education; for aspirations A2 and A4: Vocational route | *conditional on aspiring to stay*

Overall, 90% of the individuals were aspiring to stay in FT education both at age 14 and age 16. Figure 1 shows the cross-tabulation of the preliminary and later aspirations for staying or leaving FT education. Interestingly, around 60% of the individuals who intended to leave FT education at age 14 responded that they intended to stay when asked again at age 16. For individuals who indicated that they intended to stay in FT education, 74% were aspiring to an academic route at age 14 while at age 16 this proportion decreased slightly to 70%. It is evident from these raw data that the academic route is much more strongly preferred than the vocational route. Figure 2 shows that almost half of the individuals who stated that they aspired to a vocational route at age 14 changed to intending to follow an academic pathway at age 16. In contrast, only one fifth of the individuals who were aspiring to an academic route at age 14 changed to a vocational aspiration by age 16.

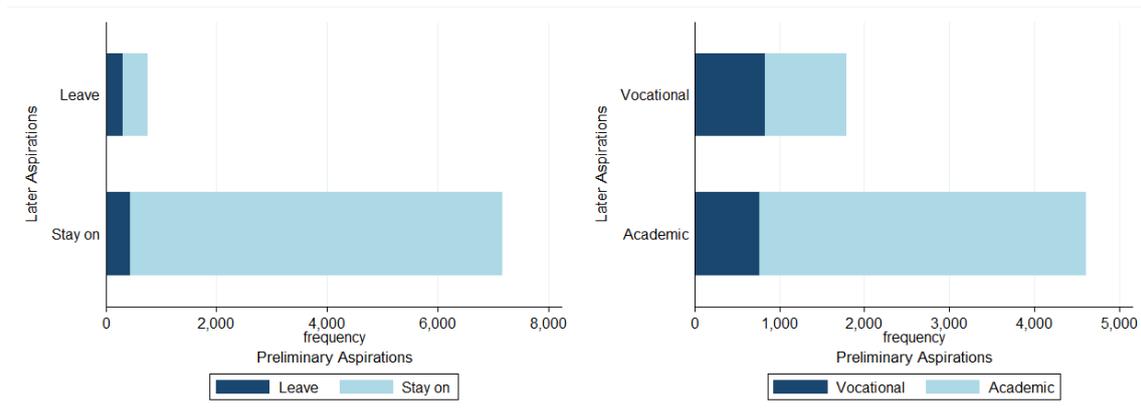


Figure 1: Leave or Stay in FT education **Figure 2: Academic or Vocational route**

Key Variables

The primary aim of this study is to analyse the effects of peers on individuals' educational aspirations. The influence of the peer group is measured in three different ways: first, through peers' average ability as reflected in their educational achievements; second, through the proportion of peers from the highest socio-economic groups; and third, through peers' own aspirations. The possible endogeneity in the peers' effects is controlled for using the average ability and socio-economic class of the peers-of-peers. Table 4 below reports the summary statistics of the key variables determining the peer effects.

Table 4: Descriptive Statistics of Key Variables

Key Variable	Mean	Std. Dev.
Secondary School Peers		
Average KS3 scores (standardised)	0	1
Proportion from highest socio-economic groups	0.20	0.14
<i>Preliminary Aspirations (age 14)</i>		
A1: Stay in FT education	0.89	0.10
A2: Academic route	0.73	0.21
<i>Later Aspirations (age 16)</i>		
A3: Stay in FT education	0.90	0.10
A4: Academic route	0.69	0.22
Peers-of-Peers		
Average KS2 scores (standardised)	0	1
Proportion from highest socio-economic groups	0.19	0.14

Peers' ability

Peers' ability is measured by average secondary school peers' achievements in KS3 exams (Maths, English, Science) in standardised form. To avoid possible endogeneity, peers' ability is instrumented by the average ability of the primary school peers-of-peers, measured by average achievements in KS2 exams (Maths, English, Science) in standardised form.

Proportion of peers from highest socio-economic groups

The influence of peers' socio-economic background is measured by the proportion of peers with at least one parent in a professional or managerial occupation at age 14. To avoid possible endogeneity, the proportion of secondary school peers from the highest socio-economic groups (SEG) is instrumented with the proportion of primary school peers-of-peers from the highest SEG⁴. Figures 3 and 4 show the distribution of these variables and reveal the large variation in socio-economic background across schools.

Peers' educational aspirations

Peers' educational aspirations are measured by the average secondary school peers' aspirations which rank from 0 to 1, with values closer to 1 indicating that more peers are aspiring to stay in FT education (for aspirations A1 and A3) or to follow an Academic route (for aspirations A2 and A4). Figures 5, 6, 7 and 8 present the distribution of peers' aspirations. These figures show large variation in aspirations across schools, particularly

⁴The full list of SEG includes: professional and managerial occupations, skilled occupations, partly-skilled occupations, unskilled occupations and unemployment.

in the aspirations to follow an academic or vocational route. The possible endogeneity of peers' aspirations has been handled by instrumenting these with peers-of-peers' ability and socio-economic background.

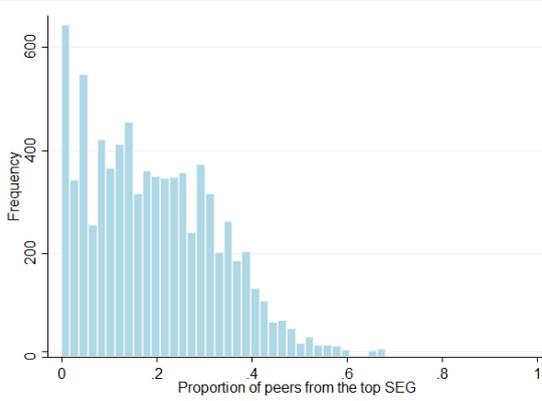


Figure 3: Peers' from top SEG

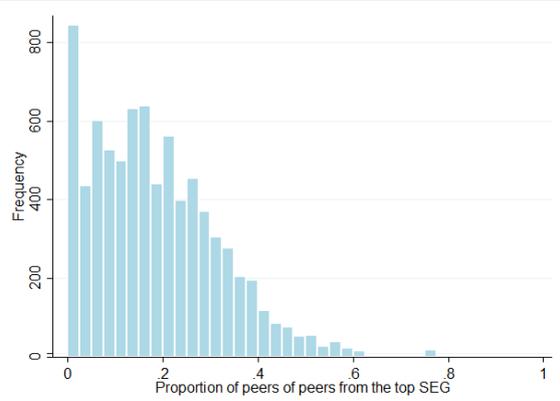


Figure 4: Peers-of-peers from top SEG

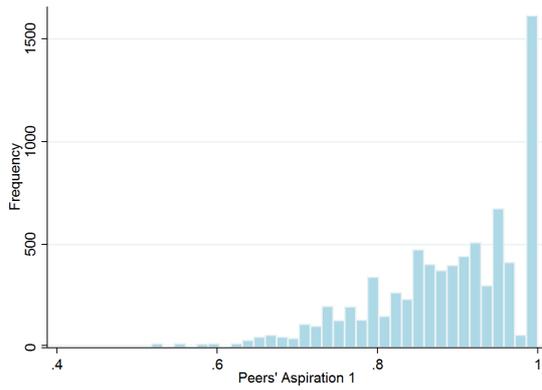


Figure 5: Peers' A1: Stay in FE ed

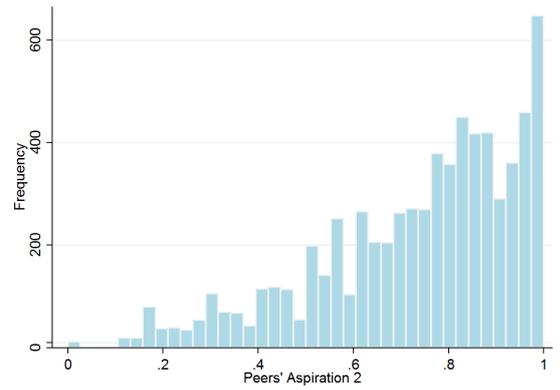


Figure 6: Peers' A2: Academic route

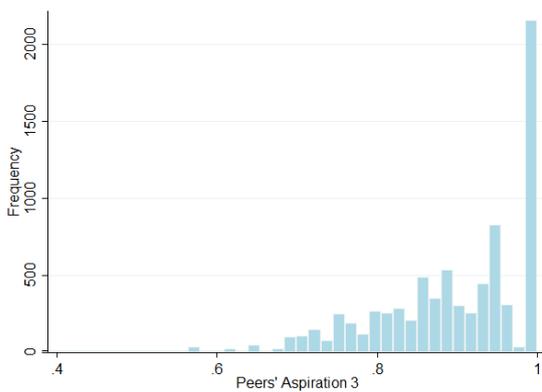


Figure 7: Peers' A3: Stay in FT ed

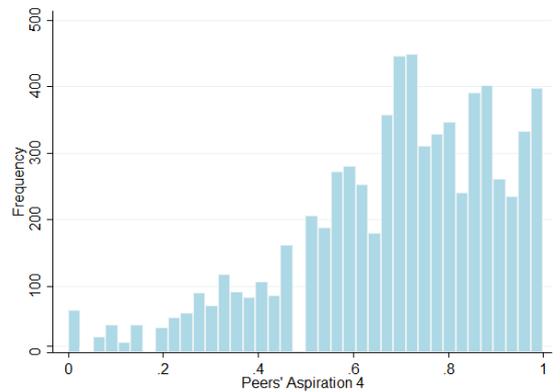


Figure 8: Peers' A4: Academic route

Control Variables

The LSYPE dataset is very rich in background information about the individual and their family and household as well as the characteristics of the secondary school attended. This information is included in the regression analyses to control for other conflating factors which may impact upon an individual’s educational aspirations in order to identify the impact of peers’ (achievements, socio-economic background and aspirations) on the individual’s educational aspirations.

Three variants of the model have been estimated, progressively adding more covariates. The first specification controls for individual demographics, including gender, ethnicity, ability (as reflected in their KS2 scores), and the education and employment status of both parents. The second specification adds household composition characteristics including the age of both parents, parents’ marital status and the number of siblings. The third specification adds school’s class size and geographic region. The descriptive statistics for the control variables are provided in Appendix A⁵.

5 Identification Strategy

To investigate peer effects on educational aspirations, we estimate a linear-in-means model for the i^{th} individual who attended secondary school s and primary school p :

$$Y_{i,s,p} = \beta_0 + \beta \bar{A}_s + \gamma X_i' + \epsilon_i$$

where $Y_{i,s,p}$ is the aspiration of individual i who attended secondary school s and primary school p , \bar{A}_s is the peer effect for secondary school s excluding the individual i and X_i' is a vector of individual, household, family and school characteristics for individual i .

The parameter of interest is β which captures the relationship between secondary school peers and individual i ’s aspirations. As the estimates of β are likely to be biased due to endogeneity and selection, the identification strategy relies on instrumenting these peers with the peers-of-peers. In particular, we use the primary school peers of the individual’s

⁵All the details concerning the sources and definitions of each control variable are available from the authors on request.

secondary school peers who attended a different primary school from the individual as an instrument for their secondary school peers. Peers' achievements in KS3 exams have been instrumented using peers-of-peers' achievements in KS2 exams. The proportion of peers from the highest SEG has been instrumented with the primary schools' peers-of-peers proportion from highest SEG. Finally, peers' aspirations have been instrumented using both peers-of-peers achievements in KS2 exams and their SEG.

The first stage equation is:

$$\bar{A}_s = \delta_0 + \delta \bar{K}_{q,r} + \pi X'_i + \nu_i$$

where the average peer effect \bar{A}_s depends on the peers-of-peers who attended primary school q and secondary school r , where $r \neq s$ and $q \neq p$. The defining point is that the peers-of-peers have not been in either the same primary school or secondary school as the individual of interest. The underlying assumption behind this identification strategy is that the peers-of-peers can not have affected the individual's aspirations directly, but rather only through their effect on the individual's current secondary school peers.

Any bias driven by the selection into secondary schools on the basis of unobservables (for example, parents choosing the school for their children), is mitigated by the nature of the primary to secondary school transition in England. Most secondary schools participating in LSYPE have more than eight primary school feeders and therefore the peers-of-peers are likely to have come from areas with different socio-economic characteristics. Further, [Gibbons et al. \(2013\)](#) showed that neighbourhood composition in England has a very limited effect on individual achievements once own family background is accounted for. The very rich set of control variables afforded by the LSYPE means that we can successfully account for such factors.

6 Empirical Results

6.1 Main findings and robustness checks

The main results are reported in Table 5, which shows the coefficient of interest (β) on the peer effect variable in various specifications. The equations for each aspiration are estimated using both the Linear Probability Model (LPM) and IV-Two Stage Least Squares (IV-2SLS) regressions⁶, using instruments for the peer effects as described above. We use robust standard errors clustered at the secondary school level in all of our estimated models. For each method, there are three specifications that condition on increasingly adding more covariates, as described in Section 5 above, and summarised in the footnotes to the table. The first stage results of the IV-2SLS estimations in each specification together with their F-statistics, verifying the validity of our instruments, are presented in Appendix B. To summarise the key message to come out of Table 5, there is strong evidence for positive peer effects influencing the decision to choose an academic rather than vocational route in both preliminary (at age 14) and later aspirations (at age 16) amongst those who have decided to continue with their education (aspirations A2 and A4). This result is independent of how the peer effects are measured, the additional factors controlled for in the regression specification, and whether or not the peer effects are treated as endogenous. The evidence is clear that studying with peers with a higher level of prior achievement, or from higher SEG, or peers whose own aspirations are to follow an academic route, are all associated with a higher likelihood that an individual will aspire to academic post-compulsory education themselves.

Considering the results in more detail, focusing first on the IV results for the academic vs. vocational aspirations, then at age 14 (column 4), a 1 standard deviation increase in an individual's peers' KS3 scores is associated with an 3-5 percentage point (p.p.) increase in the likelihood that they aspire to an academic rather than a vocational post-compulsory education pathway. The range of effects is determined by the number of other factors controlled for, with the most extensive range of controls being associated with the estimate at the bottom of the range. In addition, each 10 p.p. increase in the proportion

⁶We also estimated our models using Probit and IV-Probit regressions given the aspirations are all binary (1.0) variables, and our findings remain unchanged.

of an individual's peers coming from the highest SEG is associated with a 2.8 to 3.6 p.p. increase in the likelihood that the individual aspires to the academic route. Finally, each 10 p.p. increase in the proportion of an individual's peers who aspire to the academic route is associated with a 5 to 6 p.p. increase in the likelihood that the individual has similar aspirations themselves. At age 16 (column 8), the estimated peer effects are very similar for the prior attainment measure, although are slightly smaller in magnitude for the socio-economic background and peers aspirations categories.

Comparing the LPM to the IV-2SLS results, the IV effects are slightly smaller in magnitude in most cases while there are some cases where the IV estimates are actually larger than the LPM effects. Collectively, however, the results suggest that the selection bias is small.

Turning to the decision whether to continue in education after the age of 16, the evidence that individuals' intentions are influenced by their peers is much weaker. At age 14 (Aspiration 1), the LPM results (column 1) reveal positive coefficients on the peers socio-economic background and aspirations variables, but these are small in magnitude, and are statistically insignificant for the peer achievement measure. Furthermore, these coefficients all become even smaller, and statistically insignificant in every case (column 2) when the IV methodology is applied, suggesting that any positive correlation that is observed in column 1 is in fact more likely due to endogenous selection into peer groups, than to true causal effects of the peers. Two years later, when pupils are aged 16 and closer to making their decision whether to continue in FT education or not (Aspiration 3), there is evidence that positive peer effects are present even after instrumenting (column 6) for two of our peer effects measures, although these effects are small in magnitude. As Table 3 showed earlier, around 90% of pupils intend to continue in FT education, and so for most this would appear to be almost an automatic choice, regardless of their peers. It may be that at the margin, some pupils are influenced by the aspirations of those around them, but for most it is not a marginal decision, and so such effects are small in the aggregate results presented here.

The full regression results including the other independent variables are reported in Appendix C. As expected, family socio-economic background (particularly parents' education) and individual's own achievements in KS2 exams are strong determinants of educa-

tional aspirations. In addition, girls, pupils from Black/Asian backgrounds, and those who live in London are found to be more academically ambitious, aspiring to stay in education and to follow an academic route. Further, individuals with fewer siblings and those whose parents are married are also found to have stronger intentions to stay in FT education, and to follow an academic route. Interestingly, larger class size is found to negatively affect an individual’s aspirations to stay in education and to follow an academic route.

As reported in Appendix D, the robustness of these findings has been tested using three sensitivity analyses on our most detailed model (Specification 3). First, the model has been re-estimated excluding observations from very small secondary schools (with fewer than 700 students). As explained by Mendolia et al. (2018), larger secondary schools typically draw their intake from a greater number of primary schools and this is likely to lessen the problem associated with socio-economic sorting in primary schools. Secondly, the main results have been re-estimated limiting the sample to schools who have at least 10 LSYPE individuals. Both of these sensitivity analyses corroborate the main findings in Table 5. Our final sensitivity analysis involved sorting our sample by the number of peers-of-peers they have and then re-estimating our main results using different subsamples, progressively excluding individuals with smaller numbers of peers-of-peers. The aim of this analysis is to show the approximate stability of our findings as we progressively exclude individuals with few peers-of-peers and also to identify whether our results could be affected by the fact that we only use a small sample (LSYPE participants) of the total cohort of individuals who finished school in 2006. Interestingly, the outcome of this analysis shows that peer effects become stronger when we limit our sample to individuals who have many peers-of-peers.

6.2 Heterogeneous peer effects and peer effects on the probability of pupils changing their aspirations between Year 9 and Year 11

Some of our findings might be driven by the fact that the effect of peers on individual aspirations is heterogeneous, such that peers’ influence might be more important for particular groups of students. For example, some students might be more heavily influenced by the existence of higher achieving peers while others not. For this reason we examine potential

heterogeneity of peer interactions, first, by estimating peer effects by gender and second, by examining peer effects for pupils who received different types of information, advice and guidance (IAG) concerning their educational plans and future aspirations. Finally, we examine peer influence on whether pupils change their aspirations between age 14 and age 16. For ease of exposition, only results from Specification 3 are presented for all of these analyses.

Tables 6 and 7 present results separately for girls and boys respectively. For preliminary aspirations to follow an academic or vocational route in post-compulsory education (aspiration A2), the peer effects are quite similar for girls and boys though they appear to be slightly larger in magnitude for boys. The peer effects on later aspirations to follow an academic or vocational route in post-compulsory education (aspiration A4) become smaller and statistically insignificant for girls while remaining positive and significant for boys for two of our three peer effect measures. Interestingly, for individuals' later aspirations to continue into post-compulsory education (aspiration A3), all peer effects when estimated by IV, are small and statistically insignificant for girls while positive and significant for boys for all three of our peer measures. Considering our gender analysis all together, our findings suggest that peer influences on educational aspirations appear to be stronger on boys than on girls.

Tables 8-11 present our analysis of peer effects for the pupils who received educational IAG compared with those pupils who did not receive any advice. Specifically, the pupils are separated into four groups. Those who received no advice, those who received advice from a Connexions Personal adviser or someone else at Connexions, those who received advice from a careers adviser/ teacher or other teacher at school and those who received both Connexions and teacher advice⁷. The analysis of peer effects on the preliminary aspirations

⁷Connexions was a UK governmental information, advice, guidance and support service for young people aged 13-19, created in 2000 following the Learning and Skills Act. There were several Connexions Centres in each county which offered support and advice on topics including education, housing, health, relationships, drugs, and finance. Connexions is no longer a coherent National Service following the announcement of changes to the delivery of careers in England by the Coalition government. A 2010 research report by the National Youth Agency and the Local Government Association noted that some young people were unclear about the role and function of Connexions, although those who had interacted with the service were generally positive about it (Hibbert, 2010). Connexions was external to schools and therefore a visit to a Connexions advisor was an active choice in contrast to careers/ teacher advice at school which is more random, from the point of view of the pupils, depending on the schools' policy. Therefore, we consider separately the pupils who received only Connexions advice from those who received only school advice and those who received both forms of advice.

of pupils who received advice compared to those who did not, has been examined based on information concerning whether they received advice by the end of Year 9 of compulsory schooling. Similarly, peer effects on the later aspirations of pupils who received advice compared to those who did not, are examined based on whether the pupils received advice by Year 11 which is their final compulsory school year. As shown by the number of observations for each sub-group of students, presented in Tables 8-11, about 47% of the students had not received any IAG by Year 9, when their preliminary aspirations were recorded, while by Year 11 only 5% of the pupils had received no advice. The majority of pupils in Year 11 (62%) received both Connexions and school advice.

The outcome of this analysis is interesting. Peer effects on pupils' preliminary aspirations to follow an academic or a vocational route (Aspiration 2) are statistically insignificant for most pupils who received IAG, while they remain positive and statistically significant for the pupils who received no advice. Peer effects on the pupils' later aspirations (Aspiration 4) are still positive and significant for those who received no advice and for the students who received only school advice while becoming statistically insignificant for the pupils who received only Connexions advice and those who received both school and Connexions advice⁸. For pupils' early and later aspirations of whether to stay in education or not (Aspiration 1 and Aspiration 3), peer effects are statistically insignificant for all groups of pupils⁹.

Our final analysis presented in Table 12 investigates peer influences on whether pupils change their aspirations between Year 9 and Year 11 of compulsory schooling (between age 14 and age 16). The results show that having a greater proportion of peers from a higher SEG and higher ability peers are both associated with a lower likelihood of an individual changing aspirations between Year 9 and Year 11, especially regarding the choice between academic and vocational pathways, conditional on the intention to stay in FT education (Aspiration 2). Thus, not only do peers influence individuals' intentions for undertaking academic rather than vocational post-compulsory education, but they also

⁸It is acknowledged that in this case where the influence of peers on aspirations becomes insignificant, it could still be the case that the individuals were inspired by their peers to obtain the Connexions advice in the first place.

⁹There is one exception on the later aspirations of pupils who received both school and Connexions advice where we still find a positive peer influence for one of our peer effects measures.

make their aspirations less likely to vary over time.

7 Conclusions

This paper has established the existence of strong causal effects of peers on pupils aspirations about their post-compulsory education, in particular whether to follow an academic rather than a vocational route. The results show that pupils who attend school with higher achieving peers, a greater proportion of peers from a higher socio-economic background, and with peers who are more likely to aspire to an academic post-compulsory education, are more likely to aspire to follow an academic route themselves. The causality is established by using an IV procedure to account for the endogenous nature of peer group formation and selection. We take advantage of the fact that our linked administrative data identify both the primary school and the secondary school attended by each LSYPE respondent. This enables us to utilise the ‘peers-of-peers’, i.e. pupils who attended the same primary school as an individual’s peers, but a different primary and secondary school to the individual themselves.

Our results are consistent with many studies that have found evidence for peer effects. In particular, they are consistent with the findings of [Mendolia et al. \(2018\)](#) and [Speckesser and Hedges \(2017\)](#), who also consider secondary school pupils in England. We add to this literature by focusing on aspirations, showing for the first time that peers are important in forming individuals’ post-compulsory educational aspirations. Given the importance of aspirations for eventual outcomes, our results can therefore help to explain the relationships between peers’ outcomes that were observed in these earlier studies. In particular, the results presented in this paper show that peers can influence the aspirations of girls and, particularly, boys to follow an academic pathway post-16, conditional on having decided to continue with their education.

The results have implications for allocations of pupils across schools. Even in a mostly comprehensive education system as in England, with no selection by schools on ability, there are still large differences in pupil intakes across schools, in terms of their socio-economic background and prior ability, as shown in [Section 4](#) above. This is mostly

associated with clustering of families by background, with better-off families able to pay higher house prices closer to high-performing schools (Gibbons and Machin, 2003).

The analysis does not pass judgement as to whether the peer effects on choice of route benefit the individual in question or not. While in some cases individuals may be inspired to undertake a route that turns out to be beneficial but which they might not otherwise have chosen, in other cases, they may be influenced by their peers to take a less advantageous or appropriate route. For example, some individuals could follow their academic-orientated peers when a vocational course may have been more suitable for them, while other individuals in a vocationally-dominant peer group may be more suited to academic study themselves. In such cases where an individual could be influenced into making the 'wrong' choice for their own personal circumstances by simply following their peers, our analysis of peer effects on pupils who received educational IAG suggests that such advice could play an important role given that it is shown to weaken the influence of peers. Given the difficulty of identifying a priori those pupils who would make the 'wrong' choice if following their peers, this suggests the importance of providing educational advice and guidance to all pupils as an alternative source of information to guide choices.

Table 5: LPM and IV-2SLS estimates of peer effects on educational aspirations

	Preliminary aspirations: age 14				Later aspirations: age 16			
	Stay/Leave FT ed		Acad/Voc route		Stay/Leave FT ed		Acad/Voc route	
	LPM	IV-2SLS	LPM	IV-2SLS	LPM	IV 2SLS	LPM	IV-2SLS
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Peer effect: Average peers' achievements in KS3 exams								
Specification 1	0.004 (0.004)	0.005 (0.006)	0.055*** (0.008)	0.050*** (0.014)	0.012*** (0.003)	0.011* (0.006)	0.036*** (0.008)	0.040*** (0.014)
Specification 2	0.003 (0.004)	0.004 (0.006)	0.052*** (0.008)	0.045*** (0.014)	0.009*** (0.003)	0.007 (0.006)	0.033*** (0.008)	0.036*** (0.014)
Specification 3	0.003 (0.004)	0.004 (0.007)	0.044*** (0.008)	0.035*** (0.014)	0.009** (0.003)	0.006 (0.006)	0.025*** (0.007)	0.029** (0.013)
Peer effect: % of students with parents in the highest socio-economic groups								
Specification 1	0.050* (0.026)	0.060* (0.036)	0.366*** (0.064)	0.356*** (0.084)	0.082*** (0.025)	0.089*** (0.033)	0.227*** (0.065)	0.231*** (0.089)
Specification 2	0.044* (0.026)	0.052 (0.036)	0.345*** (0.064)	0.331*** (0.085)	0.069*** (0.025)	0.073** (0.033)	0.208*** (0.066)	0.210** (0.090)
Specification 3	0.042 (0.027)	0.051 (0.037)	0.290*** (0.059)	0.281*** (0.080)	0.060** (0.026)	0.063* (0.035)	0.147** (0.065)	0.148* (0.088)
Peer effect: Average peers' aspirations								
Specification 1	0.220*** (0.043)	0.159 (0.118)	0.747*** (0.021)	0.641*** (0.081)	0.249*** (0.044)	0.345*** (0.117)	0.633*** (0.027)	0.400*** (0.094)
Specification 2	0.220*** (0.043)	0.128 (0.124)	0.741*** (0.021)	0.592*** (0.085)	0.237*** (0.044)	0.264** (0.123)	0.626*** (0.027)	0.400*** (0.094)
Specification 3	0.212*** (0.045)	0.131 (0.130)	0.707*** (0.023)	0.551*** (0.095)	0.213*** (0.048)	0.232* (0.137)	0.592*** (0.029)	0.340*** (0.108)
Observations	7938	7938	6950	6950	7938	7938	7053	7053

Robust standard errors clustered at the secondary school level are reported in in parentheses.

Significance: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Specification 1: gender, ethnicity, KS2 scores, parents' employment status, parents' education.

Specification 2: Specification 1 plus parents' age, number of siblings, parents' marital status.

Specification 3: Specification 2 plus geographic region and class size

Table 6: LPM and IV-2SLS estimates of peer effects on educational aspirations of girls

	Preliminary aspirations: age 14				Later aspirations: age 16			
	Stay/Leave FT ed		Acad/Voc route		Stay/Leave FT ed		Acad/Voc route	
	LPM	IV-2SLS	LPM	IV-2SLS	LPM	IV-2SLS	LPM	IV-2SLS
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Peers' Average KS3 scores	0.007 (0.005)	0.008 (0.010)	0.044*** (0.010)	0.032* (0.017)	0.009 (0.005)	-0.005 (0.011)	0.027*** (0.009)	0.019 (0.016)
Peers' SEG	0.047 (0.044)	0.067 (0.057)	0.245*** (0.075)	0.248** (0.098)	0.031 (0.044)	0.035 (0.056)	0.116 (0.074)	0.139 (0.103)
Peers' Average Aspirations	0.179*** (0.068)	0.201 (0.183)	0.744*** (0.035)	0.515*** (0.157)	0.250*** (0.065)	-0.025 (0.249)	0.568*** (0.041)	0.287* (0.161)
Observations	3895	3895	3270	3270	3895	3895	3309	3309

Robust standard errors clustered at the secondary school level are reported in in parentheses.

Significance: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Included but not shown: Specification 3 variables.

Table 7: LPM and IV-2SLS estimates effects of peer effects on educational aspirations of boys

	Preliminary aspirations: age 14				Later aspirations: age 16			
	Stay/Leave FT ed		Acad/Voc route		Stay/Leave FT ed		Acad/Voc route	
	LPM	IV-2SLS	LPM	IV-2SLS	LPM	IV-2SLS	LPM	IV-2SLS
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Peers' Average KS3 scores	-0.001 (0.005)	-0.003 (0.008)	0.044*** (0.009)	0.049** (0.018)	0.007* (0.004)	0.014* (0.008)	0.022** (0.010)	0.039** (0.019)
Peers' SEG	0.020 (0.032)	0.018 (0.043)	0.334*** (0.071)	0.318*** (0.100)	0.073** (0.031)	0.070* (0.038)	0.166** (0.080)	0.150 (0.112)
Peers' Average Aspirations	0.225*** (0.052)	-0.020 (0.189)	0.679*** (0.036)	0.597*** (0.125)	0.174** (0.068)	0.375** (0.174)	0.606*** (0.039)	0.382*** (0.144)
Observations	4043	4043	3680	3680	4043	4043	3744	3744

Robust standard errors clustered at the secondary school level are reported in in parentheses.

Significance: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Included but not shown: Specification 3 variables.

Table 8: LPM and IV-2SLS estimates of peer effects on educational aspirations of pupils who received no advice

	Preliminary aspirations: age 14				Later aspirations: age 16			
	Stay/Leave FT ed		Acad/Voc route		Stay/Leave FT ed		Acad/Voc route	
	LPM	IV-2SLS	LPM	IV-2SLS	LPM	IV-2SLS	LPM	IV-2SLS
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Peers' Average KS3 scores	-0.000 (0.006)	0.006 (0.009)	0.042*** (0.009)	0.060*** (0.017)	0.040*** (0.015)	0.040 (0.029)	0.049** (0.022)	0.068* (0.039)
Peers' SEG	0.037 (0.042)	0.057 (0.057)	0.344*** (0.073)	0.390*** (0.100)	0.104 (0.097)	-0.027 (0.145)	0.333* (0.178)	0.349* (0.193)
Peers' Average Aspirations	0.222*** (0.065)	0.158 (0.175)	0.740*** (0.037)	0.725*** (0.131)	0.260 (0.174)	0.785 (0.673)	0.518*** (0.115)	0.627** (0.285)
Observations	3319	3319	2894	2894	424	424	377	377

Robust standard errors clustered at the secondary school level are reported in in parentheses.

Significance: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Included but not shown: Specification 3 variables.

28

Table 9: LPM and IV-2SLS estimates of peer effects on educational aspirations of pupils who received only Connexions advice

	Preliminary aspirations: age 14				Later aspirations: age 16			
	Stay/Leave FT ed		Acad/Voc route		Stay/Leave FT ed		Acad/Voc route	
	LPM	IV-2SLS	LPM	IV-2SLS	LPM	IV-2SLS	LPM	IV-2SLS
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Peers' Average KS3 scores	-0.004 (0.007)	-0.005 (0.012)	0.053*** (0.013)	0.030 (0.025)	0.014* (0.008)	0.017 (0.016)	0.022* (0.012)	0.024 (0.022)
Peers' SEG	0.070 (0.045)	0.077 (0.066)	0.209** (0.094)	0.018 (0.133)	0.075 (0.071)	0.073 (0.089)	0.186* (0.107)	0.082 (0.136)
Peers' Average Aspirations	0.113 (0.077)	0.064 (0.337)	0.652*** (0.053)	0.268 (0.234)	0.551*** (0.139)	0.433 (0.375)	0.564*** (0.061)	0.260 (0.228)
Observations	1949	1949	1713	1713	1610	1610	1360	1360

Robust standard errors clustered at the secondary school level are reported in in parentheses.

Significance: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Included but not shown: Specification 3 variables.

Table 10: LPM and IV-2SLS estimates of peer effects on educational aspirations of pupils who received only school advice

	Preliminary aspirations: age 14				Later aspirations: age 16			
	Stay/Leave FT ed		Acad/Voc route		Stay/Leave FT ed		Acad/Voc route	
	LPM	IV-2SLS	LPM	IV-2SLS	LPM	IV-2SLS	LPM	IV-2SLS
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Peers' Average KS3 scores	0.002 (0.009)	-0.006 (0.017)	0.044** (0.019)	0.002 (0.034)	0.003 (0.009)	-0.006 (0.017)	0.023 (0.015)	0.061** (0.025)
Peers' SEG	-0.022 (0.073)	-0.026 (0.102)	0.252* (0.150)	0.063 (0.201)	0.069 (0.062)	0.075 (0.093)	0.197 (0.120)	0.301* (0.160)
Peers' Average Aspirations	0.201 (0.126)	-0.133 (0.373)	0.713*** (0.080)	0.085 (0.412)	-0.029 (0.086)	0.019 (0.332)	0.521*** (0.087)	0.599*** (0.211)
Observations	817	817	744	744	938	938	856	856

Robust standard errors clustered at the secondary school level are reported in in parentheses.

Significance: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Included but not shown: Specification 3 variables.

29

Table 11: LPM and IV-2SLS estimates of peer effects on educational aspirations of pupils who received both Connexions and school advice

	Preliminary aspirations: age 14				Later aspirations: age 16			
	Stay/Leave FT ed		Acad/Voc route		Stay/Leave FT ed		Acad/Voc route	
	LPM	IV-2SLS	LPM	IV-2SLS	LPM	IV-2SLS	LPM	IV-2SLS
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Peers' Average KS3 scores	0.009 (0.009)	0.004 (0.018)	0.044*** (0.016)	0.015 (0.031)	0.007* (0.004)	0.001 (0.008)	0.025*** (0.009)	0.022 (0.016)
Peers' SEG	-0.034 (0.061)	-0.006 (0.094)	0.228* (0.133)	0.320* (0.166)	0.044 (0.030)	0.069* (0.038)	0.094 (0.072)	0.124 (0.102)
Peers' Average Aspirations	0.211** (0.097)	0.064 (0.499)	0.674*** (0.072)	0.527* (0.289)	0.130*** (0.050)	0.199 (0.179)	0.602*** (0.034)	0.274* (0.158)
Observations	1026	1026	925	925	4884	4884	4397	4397

Robust standard errors clustered at the secondary school level are reported in in parentheses.

Significance: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Included but not shown: Specification 3 variables.

Table 12: LPM and IV-2SLS estimates effects of peer effects on the probability of changing educational aspirations between Year 9 and Year 11 of school

	Changed Stay/Leave Aspiration		Changed Ac/Voc Aspiration	
	LPM	IV-2SLS	LPM	IV-2SLS
Peers' Average KS3 scores	-0.008** (0.004)	-0.003 (0.007)	-0.037*** (0.007)	-0.054*** (0.012)
Peers' SEG	-0.071** (0.028)	-0.061 (0.039)	-0.187*** (0.049)	-0.191*** (0.066)
Observations	7938	7938	6402	6402

Robust standard errors clustered at the secondary school level are reported in in parentheses.

Significance: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Included but not shown: Specification 3 variables.

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Appendix A Control Variables

Table A.1: Descriptive Statistics for Control Variables¹⁰

Specification	Control Variable	Mean	Std. Dev.	
<i>Specification 1</i>	Female	0.509	0.500	
	White	0.649	0.477	
	KS2 score (standardised)	0	1	
	<u>Parents' Employment Status</u>			
	MP Employed	0.643	0.479	
	MP Self Employed	0.048	0.215	
	MP Unemployed	0.024	0.154	
	MP Out of the labour	0.272	0.445	
	MP Missing	0.012	0.108	
	SP Employed	0.479	0.500	
	SP Self Employed	0.074	0.263	
	SP Unemployed	0.018	0.132	
	SP Out of the labour	0.100	0.300	
	SP Missing	0.329	0.470	
	<u>Parents' Education</u>			
	MP Academic Degree	0.238	0.426	
	MP A levels	0.136	0.343	
	MP Other Qualification	0.358	0.480	
	MP No qualification	0.233	0.423	
	MP Missing	0.035	0.183	
	SP Academic Degree	0.149	0.356	
	SP A levels	0.105	0.307	
	SP Other Qualification	0.204	0.403	
SP No qualification	0.191	0.393		
SP Missing	0.351	0.477		
<i>Specification 2</i>	<i>Specification 1 plus ...</i>			
	MP's Age	42.320	6.361	
	SP's Age	43.703	5.705	
	Number of siblings	2.027	1.491	
	MP Married	0.758	0.428	
	MP Single	0.068	0.252	
	MP Divorced/ Other	0.171	0.376	
	MP Missing	0.003	0.057	
	SP Married	0.737	0.440	
	SP Single	0.004	0.063	
	SP Divorced/ Other	0.005	0.073	
SP Missing	0.253	0.435		
<i>Specification 3</i>	<i>Specification 2 plus ...</i>			
	<u>Geographic Region</u>			
	London	0.205	0.404	
	North East	0.042	0.200	
	North West	0.133	0.340	
	Yorkshire and Humber	0.105	0.307	
	East Midlands	0.074	0.262	
	West Midlands	0.262	0.440	
	East of England	0.178	0.383	
	Class size	22.037	2.051	
Observations		7938		

¹⁰Young people's parents are defined as Main Parent(MP) and Second Parent(SP).

Appendix B First Stage Results

Table B.1: First stage estimates and F-statistics

	A1: Stay/Leave	F-statistic	A2: Acad/Voc	F-statistic	A3: Stay/Leave	F-statistic	A4: Acad/Voc	F-statistic
Endogenous variable: Average peers' achievements in KS3 exams								
Instrumental variable: Average peers-of-peers' achievements in KS2 exams								
Specification 1	0.951*** (0.054)	317.00	0.968*** (0.054)	321.35	0.951*** (0.054)	317.00	0.971*** (0.055)	312.63
Specification 2	0.951*** (0.054)	309.07	0.968*** (0.054)	312.26	0.951*** (0.054)	309.07	0.971*** (0.055)	305.80
Specification 3	0.951*** (0.054)	315.56	0.968*** (0.054)	323.71	0.951*** (0.054)	315.56	0.971*** (0.055)	313.52
Endogenous variable: % of peers from the highest socio-economic group								
Instrumental variable: % of peers-of-peers from the highest socio-economic group								
Specification 1	0.693*** (0.025)	859.58	0.687*** (0.025)	808.40	0.693*** (0.025)	859.58	0.691*** (0.025)	827.06
Specification 2	0.693*** (0.025)	849.75	0.687*** (0.025)	798.39	0.693*** (0.025)	849.75	0.691*** (0.025)	818.07
Specification 3	0.693*** (0.025)	783.87	0.687*** (0.025)	733.54	0.693*** (0.025)	783.87	0.691*** (0.025)	745.09
Endogenous variable: Average peers' aspirations								
Instrumental variable (1): % of peers-of-peers from the highest SEG (2): Average peers-of-peers' achievements in KS2 exams								
Specification 1		37.76		27.61		32.99		28.74
Instrumental variable 1:	0.036*** (0.007)		0.054*** (0.015)		0.026*** (0.006)		0.071*** (0.015)	
Instrumental variable 2:	0.063** (0.026)		0.215*** (0.060)		0.081*** (0.026)		0.145** (0.068)	
Specification 2		36.91		27.61		32.29		28.25
Instrumental variable 1:	0.036*** (0.007)		0.054*** (0.015)		0.026*** (0.006)		0.071*** (0.015)	
Instrumental variable 2:	0.063** (0.026)		0.215*** (0.060)		0.081*** (0.026)		0.145** (0.068)	
Specification 3		33.03		25.41		25.77		24.95
Instrumental variable 1:	0.036*** (0.007)		0.054*** (0.015)		0.026*** (0.006)		0.071*** (0.015)	
Instrumental variable 2:	0.063** (0.026)		0.215*** (0.060)		0.081*** (0.026)		0.145** (0.068)	
Observations	7938		6950		7938		7053	

Robust standard errors clustered at the secondary school level reported in parentheses. Significance: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Angrist-Pischke first-stage F-statistics for strong instruments reported for each first-stage regression (Angrist et al., 2013).

Aspiration A1 (preliminary) and A3 (later): Stay or Leave FT education. Aspiration A2 (preliminary) and A4 (later): Academic or Vocational route.

Appendix C Main Results - Full Tables

C.1 Peer effect: Average peers' achievements on KS3 exams

Table C.1.1: LPM and IV-2SLS estimates of peer effects on age 14 aspiration to stay/leave FT education

	LPM			IV-2SLS		
	Spec 1 (1)	Spec 2 (2)	Spec 3 (3)	Spec 1 (4)	Spec 2 (5)	Spec 3 (6)
Peers' KS3 score	0.004 (0.004)	0.003 (0.004)	0.003 (0.004)	0.005 (0.006)	0.004 (0.006)	0.004 (0.007)
KS2 score	0.073*** (0.004)	0.072*** (0.004)	0.072*** (0.004)	0.073*** (0.005)	0.072*** (0.005)	0.071*** (0.005)
MP A levels	-0.014 (0.010)	-0.013 (0.010)	-0.013 (0.010)	-0.014 (0.010)	-0.013 (0.010)	-0.013 (0.010)
MP Other Qualification	-0.035*** (0.008)	-0.034*** (0.008)	-0.033*** (0.008)	-0.034*** (0.008)	-0.034*** (0.008)	-0.033*** (0.008)
MP No Qualification	-0.031*** (0.011)	-0.032*** (0.011)	-0.032*** (0.011)	-0.031*** (0.011)	-0.032*** (0.011)	-0.031*** (0.011)
MP Missing	0.005 (0.021)	0.005 (0.021)	0.006 (0.021)	0.005 (0.021)	0.005 (0.021)	0.005 (0.021)
SP A levels	-0.009 (0.011)	-0.008 (0.011)	-0.009 (0.011)	-0.009 (0.011)	-0.008 (0.011)	-0.009 (0.011)
SP Other Qualification	-0.014 (0.010)	-0.013 (0.010)	-0.013 (0.010)	-0.013 (0.010)	-0.013 (0.010)	-0.013 (0.010)
SP No Qualification	-0.019 (0.012)	-0.017 (0.012)	-0.016 (0.012)	-0.019 (0.012)	-0.016 (0.012)	-0.016 (0.012)
SP Missing	-0.004 (0.020)	-0.002 (0.020)	-0.003 (0.020)	-0.004 (0.020)	-0.002 (0.020)	-0.003 (0.019)
MP Self Employed	0.013 (0.013)	0.012 (0.013)	0.012 (0.014)	0.013 (0.013)	0.012 (0.013)	0.012 (0.013)
MP Unemployed	0.003 (0.021)	0.005 (0.021)	0.005 (0.021)	0.003 (0.021)	0.005 (0.021)	0.005 (0.021)
MP Out of the labour	0.003 (0.008)	0.008 (0.009)	0.007 (0.009)	0.004 (0.008)	0.008 (0.009)	0.007 (0.009)
MP Missing	-0.003 (0.030)	-0.010 (0.031)	-0.007 (0.030)	-0.003 (0.030)	-0.009 (0.031)	-0.007 (0.031)
SP Self Employed	-0.025* (0.014)	-0.024* (0.014)	-0.024* (0.014)	-0.025* (0.014)	-0.024* (0.014)	-0.024* (0.014)
SP Unemployed	-0.007 (0.025)	-0.005 (0.025)	-0.008 (0.025)	-0.007 (0.025)	-0.005 (0.025)	-0.008 (0.025)
SP Out of the labour	-0.004 (0.013)	-0.003 (0.013)	-0.003 (0.013)	-0.004 (0.012)	-0.002 (0.013)	-0.002 (0.013)
SP Missing	-0.026 (0.019)	-0.009 (0.021)	-0.009 (0.021)	-0.025 (0.019)	-0.009 (0.021)	-0.009 (0.021)
Female	0.067*** (0.007)	0.068*** (0.007)	0.068*** (0.007)	0.067*** (0.007)	0.068*** (0.007)	0.068*** (0.007)
White	-0.128*** (0.008)	-0.131*** (0.008)	-0.124*** (0.009)	-0.128*** (0.008)	-0.131*** (0.008)	-0.124*** (0.009)
MP's Age		0.001*** (0.001)	0.001** (0.001)		0.001*** (0.001)	0.001** (0.001)
SP's Age		-0.001 (0.001)	-0.001 (0.001)		-0.001 (0.001)	-0.001 (0.001)
Number of siblings		-0.005** (0.002)	-0.005** (0.002)		-0.005** (0.002)	-0.005** (0.002)
MP Single		-0.007 (0.025)	-0.009 (0.025)		-0.007 (0.025)	-0.009 (0.025)
MP Divorced/ Other		0.024 (0.024)	0.023 (0.024)		0.024 (0.024)	0.023 (0.024)
MP Missing		-0.003 (0.058)	-0.007 (0.058)		-0.003 (0.058)	-0.007 (0.058)
SP Single		0.007 (0.056)	0.008 (0.056)		0.007 (0.056)	0.008 (0.056)
SP Divorced/ Other		0.087*** (0.031)	0.084*** (0.031)		0.087*** (0.031)	0.084*** (0.031)
SP Missing		-0.038 (0.024)	-0.038 (0.024)		-0.038 (0.024)	-0.038 (0.024)
North East			-0.030* (0.018)			-0.030* (0.018)
North West			-0.020* (0.012)			-0.020* (0.012)
Yorkshire and Humber			-0.021* (0.013)			-0.021* (0.013)
East Midlands			-0.042*** (0.016)			-0.042*** (0.016)
West Midlands			-0.020** (0.009)			-0.020** (0.009)
East of England			-0.015 (0.010)			-0.015 (0.010)
Class size			0.000 (0.002)			0.000 (0.002)
Constant	0.985*** (0.009)	0.968*** (0.029)	0.987*** (0.049)	0.984*** (0.010)	0.969*** (0.029)	0.986*** (0.050)
Observations	7938	7938	7938	7938	7938	7938

Robust standard errors clustered at the secondary school level reported in parentheses.

Significance: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Omitted groups: Degree; Employed; London; Married.

Table C.1.2: LPM and IV-2SLS estimates of peer effects on age 14 aspiration to follow academic/vocational route

	LPM			IV-2SLS		
	Spec 1 (1)	Spec 2 (2)	Spec 3 (3)	Spec 1 (4)	Spec 2 (5)	Spec 3 (6)
Peers' KS3 score	0.055*** (0.008)	0.052*** (0.008)	0.044*** (0.008)	0.050*** (0.014)	0.045*** (0.014)	0.039*** (0.014)
KS2 score	0.065*** (0.007)	0.062*** (0.007)	0.062*** (0.007)	0.067*** (0.007)	0.065*** (0.007)	0.064*** (0.007)
MP A levels	-0.057*** (0.016)	-0.055*** (0.016)	-0.051*** (0.015)	-0.059*** (0.016)	-0.056*** (0.016)	-0.052*** (0.015)
MP Other Qualification	-0.065*** (0.014)	-0.063*** (0.014)	-0.061*** (0.014)	-0.067*** (0.014)	-0.065*** (0.014)	-0.063*** (0.014)
MP No Qualification	-0.050*** (0.019)	-0.051*** (0.019)	-0.047** (0.019)	-0.053*** (0.020)	-0.054*** (0.019)	-0.050*** (0.019)
MP Missing	-0.006 (0.031)	-0.003 (0.031)	-0.003 (0.031)	-0.006 (0.031)	-0.002 (0.030)	-0.002 (0.030)
SP A levels	0.010 (0.019)	0.013 (0.019)	0.014 (0.018)	0.008 (0.019)	0.012 (0.019)	0.013 (0.018)
SP Other Qualification	-0.017 (0.017)	-0.012 (0.017)	-0.010 (0.017)	-0.020 (0.017)	-0.015 (0.017)	-0.013 (0.017)
SP No Qualification	-0.031 (0.020)	-0.026 (0.020)	-0.025 (0.020)	-0.034* (0.020)	-0.029 (0.020)	-0.027 (0.020)
SP Missing	-0.006 (0.041)	-0.002 (0.040)	0.000 (0.038)	-0.006 (0.040)	-0.003 (0.040)	-0.000 (0.038)
MP Self Employed	-0.011 (0.025)	-0.013 (0.025)	-0.016 (0.024)	-0.011 (0.025)	-0.012 (0.025)	-0.015 (0.024)
MP Unemployed	-0.061 (0.039)	-0.050 (0.040)	-0.036 (0.038)	-0.062 (0.039)	-0.051 (0.040)	-0.036 (0.037)
MP Out of the labour	-0.004 (0.014)	0.006 (0.014)	0.010 (0.014)	-0.005 (0.014)	0.005 (0.014)	0.009 (0.014)
MP Missing	-0.028 (0.060)	-0.042 (0.060)	-0.048 (0.059)	-0.034 (0.060)	-0.049 (0.060)	-0.053 (0.060)
SP Self Employed	0.010 (0.019)	0.009 (0.019)	0.004 (0.019)	0.011 (0.019)	0.010 (0.019)	0.005 (0.019)
SP Unemployed	0.064 (0.044)	0.069 (0.044)	0.083* (0.045)	0.061 (0.044)	0.066 (0.044)	0.081* (0.045)
SP Out of the labour	-0.006 (0.023)	0.001 (0.023)	-0.001 (0.022)	-0.009 (0.023)	-0.001 (0.022)	-0.003 (0.022)
SP Missing	-0.051 (0.041)	-0.024 (0.043)	-0.027 (0.042)	-0.054 (0.041)	-0.027 (0.043)	-0.029 (0.042)
Female	-0.000 (0.011)	0.001 (0.011)	0.002 (0.011)	-0.000 (0.011)	0.001 (0.011)	0.002 (0.011)
White	-0.091*** (0.015)	-0.097*** (0.015)	-0.103*** (0.016)	-0.090*** (0.015)	-0.095*** (0.015)	-0.102*** (0.016)
MP's Age		0.001 (0.001)	0.002* (0.001)		0.001 (0.001)	0.002* (0.001)
SP's Age		0.001 (0.001)	0.001 (0.001)		0.001 (0.001)	0.001 (0.001)
Number of siblings		-0.013*** (0.004)	-0.013*** (0.004)		-0.013*** (0.004)	-0.014*** (0.004)
MP Single		-0.112*** (0.040)	-0.095** (0.040)		-0.113*** (0.040)	-0.095** (0.040)
MP Divorced/ Other		-0.054 (0.036)	-0.047 (0.036)		-0.053 (0.036)	-0.046 (0.036)
MP Missing		0.006 (0.093)	0.040 (0.092)		0.006 (0.092)	0.039 (0.091)
SP Single		-0.091 (0.096)	-0.077 (0.097)		-0.092 (0.095)	-0.078 (0.097)
SP Divorced/ Other		-0.034 (0.078)	-0.050 (0.077)		-0.036 (0.078)	-0.051 (0.077)
SP Missing		0.026 (0.039)	0.022 (0.039)		0.025 (0.039)	0.020 (0.039)
North East			0.041 (0.043)			0.039 (0.043)
North West			-0.034 (0.036)			-0.034 (0.036)
Yorkshire and Humber			0.041 (0.033)			0.038 (0.033)
East Midlands			0.041 (0.036)			0.043 (0.036)
West Midlands			-0.003 (0.024)			-0.004 (0.024)
East of England			0.037 (0.025)			0.036 (0.025)
Class size			-0.031*** (0.004)			-0.032*** (0.004)
Constant	0.851*** (0.018)	0.768*** (0.050)	1.431*** (0.108)	0.856*** (0.019)	0.767*** (0.050)	1.444*** (0.109)
Observations	6950	6950	6950	6950	6950	6950

Robust standard errors clustered at the secondary school level reported in parentheses.

Significance: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Omitted groups: Degree; Employed; London; Married.

Table C.1.3: LPM and IV-2SLS estimates of peer effects on age 16 aspiration to stay/leave FT education

	LPM			IV-2SLS		
	Spec 1 (1)	Spec 2 (2)	Spec 3 (3)	Spec 1 (4)	Spec 2 (5)	Spec 3 (6)
Peers' KS3 scores	0.012*** (0.003)	0.009*** (0.003)	0.009** (0.003)	0.011* (0.006)	0.007 (0.006)	0.006 (0.006)
KS2 score	0.057*** (0.004)	0.054*** (0.004)	0.054*** (0.004)	0.057*** (0.004)	0.055*** (0.004)	0.054*** (0.004)
MP A levels	-0.031*** (0.009)	-0.028*** (0.009)	-0.029*** (0.009)	-0.031*** (0.009)	-0.029*** (0.009)	-0.029*** (0.009)
MP Other Qualification	-0.045*** (0.008)	-0.043*** (0.008)	-0.043*** (0.008)	-0.046*** (0.008)	-0.044*** (0.008)	-0.043*** (0.008)
MP No Qualification	-0.053*** (0.010)	-0.053*** (0.010)	-0.053*** (0.010)	-0.053*** (0.010)	-0.053*** (0.010)	-0.053*** (0.011)
MP Missing	-0.017 (0.022)	-0.018 (0.022)	-0.018 (0.022)	-0.017 (0.022)	-0.018 (0.022)	-0.018 (0.022)
SP A levels	-0.011 (0.011)	-0.008 (0.011)	-0.009 (0.011)	-0.011 (0.011)	-0.009 (0.011)	-0.009 (0.011)
SP Other Qualification	-0.030*** (0.010)	-0.025** (0.010)	-0.025** (0.010)	-0.030*** (0.010)	-0.026*** (0.010)	-0.025** (0.010)
SP No Qualification	-0.042*** (0.012)	-0.039*** (0.012)	-0.039*** (0.012)	-0.042*** (0.012)	-0.040*** (0.012)	-0.040*** (0.012)
SP Missing	0.004 (0.019)	0.006 (0.019)	0.005 (0.019)	0.004 (0.019)	0.006 (0.019)	0.005 (0.019)
MP Self Employed	0.002 (0.015)	0.002 (0.015)	0.003 (0.015)	0.002 (0.015)	0.002 (0.015)	0.003 (0.015)
MP Unemployed	-0.012 (0.023)	-0.006 (0.023)	-0.007 (0.022)	-0.012 (0.023)	-0.006 (0.023)	-0.007 (0.022)
MP Out of the labour	0.021*** (0.008)	0.025*** (0.008)	0.024*** (0.008)	0.021*** (0.008)	0.025*** (0.008)	0.024*** (0.008)
MP Missing	0.018 (0.030)	0.021 (0.030)	0.027 (0.030)	0.018 (0.030)	0.020 (0.030)	0.026 (0.030)
SP Self Employed	-0.009 (0.014)	-0.010 (0.014)	-0.010 (0.014)	-0.009 (0.014)	-0.010 (0.014)	-0.010 (0.014)
SP Unemployed	0.012 (0.024)	0.014 (0.024)	0.010 (0.024)	0.012 (0.024)	0.014 (0.024)	0.010 (0.024)
SP Out of the labour	0.026** (0.012)	0.028** (0.012)	0.031** (0.012)	0.026** (0.012)	0.028** (0.012)	0.030** (0.012)
SP Missing	-0.032 (0.020)	-0.026 (0.021)	-0.026 (0.021)	-0.032 (0.019)	-0.026 (0.020)	-0.026 (0.021)
Female	0.076*** (0.007)	0.076*** (0.007)	0.076*** (0.007)	0.076*** (0.007)	0.076*** (0.007)	0.076*** (0.007)
White	-0.125*** (0.008)	-0.129*** (0.008)	-0.119*** (0.009)	-0.125*** (0.008)	-0.128*** (0.008)	-0.118*** (0.009)
MP's Age		0.001 (0.001)	0.001 (0.001)		0.001 (0.001)	0.001 (0.001)
SP's Age		0.002*** (0.001)	0.002** (0.001)		0.002*** (0.001)	0.002*** (0.001)
Number of siblings		-0.007*** (0.002)	-0.007*** (0.002)		-0.007*** (0.002)	-0.007*** (0.002)
MP Single		0.002 (0.026)	-0.000 (0.026)		0.002 (0.026)	-0.000 (0.026)
MP Divorced/ Other		0.041* (0.025)	0.040* (0.024)		0.041* (0.025)	0.041* (0.024)
MP Missing		0.001 (0.055)	-0.008 (0.056)		0.001 (0.055)	-0.008 (0.055)
SP Single		-0.107 (0.072)	-0.105 (0.071)		-0.107 (0.072)	-0.104 (0.071)
SP Divorced/ Other		0.033 (0.046)	0.031 (0.045)		0.033 (0.045)	0.030 (0.045)
SP Missing		-0.034 (0.025)	-0.033 (0.025)		-0.034 (0.025)	-0.033 (0.025)
North East			-0.049** (0.022)			-0.050** (0.022)
North West			-0.030** (0.012)			-0.030** (0.012)
Yorkshire and Humber			-0.044*** (0.014)			-0.044*** (0.014)
East Midlands			-0.027* (0.016)			-0.027 (0.016)
West Midlands			-0.012 (0.008)			-0.012 (0.008)
East of England			-0.029** (0.012)			-0.029** (0.011)
Class size			0.001 (0.002)			0.001 (0.002)
Constant	0.989*** (0.010)	0.891*** (0.032)	0.897*** (0.050)	0.989*** (0.010)	0.890*** (0.032)	0.899*** (0.051)
Observations	7938	7938	7938	7938	7938	7938

Robust standard errors clustered at the secondary school level reported in parentheses.

Significance: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Omitted groups: Degree; Employed; London; Married.

Table C.1.4: LPM and IV-2SLS estimates of peer effects on age 16 aspiration to follow academic/vocational route

	LPM			IV-2SLS		
	Spec 1 (1)	Spec 2 (2)	Spec 3 (3)	Spec 1 (4)	Spec 2 (5)	Spec 3 (6)
Peers KS3 scores	0.036*** (0.008)	0.033*** (0.008)	0.025*** (0.007)	0.040*** (0.014)	0.036** (0.014)	0.029*** (0.013)
KS2 score	0.134*** (0.007)	0.130*** (0.007)	0.128*** (0.007)	0.134*** (0.007)	0.130*** (0.007)	0.128*** (0.007)
MP A levels	-0.045*** (0.016)	-0.041*** (0.015)	-0.036** (0.015)	-0.045*** (0.016)	-0.041*** (0.015)	-0.036** (0.015)
MP Other Qualification	-0.069*** (0.013)	-0.065*** (0.013)	-0.061*** (0.013)	-0.069*** (0.013)	-0.065*** (0.013)	-0.061*** (0.013)
MP No Qualification	-0.040** (0.018)	-0.047** (0.018)	-0.042** (0.018)	-0.040** (0.019)	-0.046** (0.019)	-0.042** (0.018)
MP Missing	-0.037 (0.040)	-0.037 (0.040)	-0.034 (0.038)	-0.037 (0.040)	-0.037 (0.040)	-0.035 (0.038)
SP A levels	-0.021 (0.018)	-0.019 (0.018)	-0.019 (0.018)	-0.021 (0.018)	-0.018 (0.018)	-0.019 (0.017)
SP Other Qualification	-0.029* (0.016)	-0.023 (0.016)	-0.024 (0.016)	-0.029* (0.016)	-0.023 (0.016)	-0.023 (0.016)
SP No Qualification	-0.062*** (0.021)	-0.058*** (0.021)	-0.059*** (0.021)	-0.062*** (0.021)	-0.057*** (0.021)	-0.059*** (0.021)
SP Missing	-0.041 (0.039)	-0.036 (0.039)	-0.033 (0.038)	-0.041 (0.039)	-0.036 (0.039)	-0.033 (0.038)
MP Self Employed	0.020 (0.024)	0.014 (0.025)	0.014 (0.024)	0.020 (0.024)	0.013 (0.024)	0.014 (0.024)
MP Unemployed	-0.007 (0.036)	0.001 (0.036)	0.013 (0.036)	-0.007 (0.036)	0.001 (0.036)	0.013 (0.036)
MP Out of the labour	-0.011 (0.013)	-0.002 (0.013)	-0.001 (0.013)	-0.011 (0.013)	-0.002 (0.013)	-0.001 (0.013)
MP Missing	0.137** (0.057)	0.106* (0.057)	0.113** (0.056)	0.138** (0.057)	0.107* (0.056)	0.114** (0.055)
SP Self Employed	-0.002 (0.021)	-0.002 (0.021)	-0.005 (0.020)	-0.002 (0.020)	-0.002 (0.020)	-0.005 (0.020)
SP Unemployed	-0.057 (0.044)	-0.054 (0.044)	-0.052 (0.043)	-0.057 (0.044)	-0.053 (0.044)	-0.052 (0.043)
SP Out of the labour	0.045** (0.021)	0.042** (0.021)	0.044** (0.021)	0.046** (0.021)	0.042** (0.021)	0.044** (0.021)
SP Missing	-0.066 (0.041)	0.008 (0.044)	0.003 (0.043)	-0.066 (0.040)	0.009 (0.043)	0.003 (0.043)
Female	0.028** (0.012)	0.030** (0.012)	0.030*** (0.011)	0.028** (0.012)	0.030** (0.012)	0.030*** (0.011)
White	-0.184*** (0.015)	-0.187*** (0.015)	-0.164*** (0.016)	-0.184*** (0.015)	-0.187*** (0.015)	-0.164*** (0.016)
MP's Age		0.003*** (0.001)	0.004*** (0.001)		0.003*** (0.001)	0.004*** (0.001)
SP's Age		0.000 (0.001)	-0.000 (0.001)		0.000 (0.001)	-0.000 (0.001)
Number of siblings		-0.006 (0.004)	-0.005 (0.004)		-0.006 (0.004)	-0.005 (0.004)
MP Single		-0.100** (0.042)	-0.090** (0.042)		-0.100** (0.042)	-0.090** (0.042)
MP Divorced/ Other		-0.014 (0.039)	-0.008 (0.039)		-0.014 (0.038)	-0.008 (0.038)
MP Missing		-0.021 (0.088)	-0.007 (0.086)		-0.020 (0.088)	-0.007 (0.086)
SP Single		0.010 (0.098)	0.018 (0.096)		0.010 (0.098)	0.018 (0.096)
SP Divorced/ Other		-0.014 (0.080)	-0.041 (0.083)		-0.014 (0.080)	-0.041 (0.082)
SP Missing		-0.069* (0.038)	-0.073* (0.038)		-0.069* (0.038)	-0.073* (0.038)
North East			-0.048 (0.042)			-0.047 (0.042)
North West			-0.107*** (0.033)			-0.107*** (0.033)
Yorkshire and Humber			-0.052* (0.029)			-0.052* (0.028)
East Midlands			-0.059* (0.032)			-0.059* (0.032)
West Midlands			-0.057** (0.024)			-0.057** (0.024)
East of England			-0.057** (0.028)			-0.057** (0.028)
Class size			-0.029*** (0.004)			-0.029*** (0.004)
Constant	0.864*** (0.020)	0.727*** (0.051)	1.404*** (0.103)	0.863*** (0.021)	0.727*** (0.051)	1.401*** (0.105)
Observations	7053	7053	7053	7053	7053	7053

Robust standard errors clustered at the secondary school level reported in parentheses.

Significance: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Omitted groups: Degree; Employed; London; Married.

C.2 Peer effect: Proportion of peers from the highest SEG

Table C.2.1: LPM and IV-2SLS estimates of peer effects on age 14 aspiration to stay/leave FT education

	LPM			IV-2SLS		
	Spec 1 (1)	Spec 2 (2)	Spec 3 (3)	Spec 1 (4)	Spec 2 (5)	Spec 3 (6)
Peers' SEG	0.050* (0.026)	0.044* (0.026)	0.042 (0.027)	0.060* (0.036)	0.052 (0.036)	0.051 (0.037)
KS2 score	0.073*** (0.004)	0.072*** (0.004)	0.072*** (0.004)	0.073*** (0.004)	0.072*** (0.004)	0.071*** (0.004)
MP A levels	-0.013 (0.010)	-0.013 (0.010)	-0.012 (0.010)	-0.013 (0.010)	-0.012 (0.010)	-0.012 (0.010)
MP Other Qualification	-0.034*** (0.008)	-0.033*** (0.008)	-0.032*** (0.008)	-0.033*** (0.008)	-0.033*** (0.008)	-0.032*** (0.008)
MP No Qualification	-0.029*** (0.011)	-0.030*** (0.011)	-0.030*** (0.011)	-0.029*** (0.011)	-0.030*** (0.011)	-0.030*** (0.011)
MP Missing	0.005 (0.021)	0.005 (0.021)	0.006 (0.021)	0.005 (0.021)	0.005 (0.021)	0.006 (0.021)
SP A levels	-0.008 (0.011)	-0.007 (0.011)	-0.008 (0.011)	-0.008 (0.011)	-0.007 (0.011)	-0.008 (0.011)
SP Other Qualification	-0.012 (0.010)	-0.012 (0.010)	-0.012 (0.010)	-0.012 (0.010)	-0.011 (0.010)	-0.011 (0.010)
SP No Qualification	-0.017 (0.012)	-0.015 (0.012)	-0.015 (0.012)	-0.017 (0.012)	-0.015 (0.012)	-0.014 (0.012)
SP Missing	-0.003 (0.019)	-0.002 (0.019)	-0.002 (0.019)	-0.003 (0.019)	-0.002 (0.019)	-0.002 (0.019)
MP Self Employed	0.013 (0.013)	0.011 (0.013)	0.012 (0.014)	0.013 (0.013)	0.011 (0.013)	0.012 (0.014)
MP Unemployed	0.003 (0.021)	0.005 (0.021)	0.005 (0.021)	0.003 (0.021)	0.005 (0.021)	0.005 (0.021)
MP Out of the labour	0.004 (0.008)	0.008 (0.009)	0.007 (0.009)	0.004 (0.008)	0.008 (0.009)	0.007 (0.009)
MP Missing	-0.003 (0.030)	-0.009 (0.031)	-0.007 (0.031)	-0.002 (0.030)	-0.008 (0.031)	-0.006 (0.031)
SP Self Employed	-0.026* (0.014)	-0.024* (0.014)	-0.025* (0.014)	-0.026* (0.014)	-0.025* (0.014)	-0.025* (0.014)
SP Unemployed	-0.007 (0.025)	-0.005 (0.025)	-0.008 (0.025)	-0.007 (0.025)	-0.005 (0.025)	-0.008 (0.025)
SP Out of the labour	-0.004 (0.012)	-0.002 (0.013)	-0.002 (0.013)	-0.003 (0.012)	-0.002 (0.013)	-0.002 (0.013)
SP Missing	-0.025 (0.019)	-0.009 (0.021)	-0.009 (0.021)	-0.025 (0.019)	-0.009 (0.021)	-0.009 (0.021)
Female	0.068*** (0.007)	0.068*** (0.007)	0.068*** (0.007)	0.068*** (0.007)	0.068*** (0.007)	0.068*** (0.007)
White	-0.130*** (0.008)	-0.132*** (0.008)	-0.126*** (0.009)	-0.130*** (0.008)	-0.133*** (0.008)	-0.126*** (0.009)
MP's Age		0.001** (0.001)	0.001** (0.001)		0.001** (0.001)	0.001** (0.001)
SP's Age		-0.001 (0.001)	-0.001 (0.001)		-0.001 (0.001)	-0.001 (0.001)
Number of siblings		-0.005** (0.002)	-0.005** (0.002)		-0.005** (0.002)	-0.005** (0.002)
MP Single		-0.007 (0.025)	-0.010 (0.025)		-0.007 (0.025)	-0.010 (0.025)
MP Divorced/ Other		0.024 (0.024)	0.024 (0.024)		0.024 (0.024)	0.024 (0.024)
MP Missing		-0.004 (0.059)	-0.008 (0.059)		-0.004 (0.058)	-0.008 (0.058)
SP Single		0.009 (0.056)	0.009 (0.056)		0.009 (0.056)	0.010 (0.056)
SP Divorced/ Other		0.087*** (0.031)	0.085*** (0.031)		0.087*** (0.031)	0.085*** (0.031)
SP Missing		-0.038 (0.024)	-0.038 (0.024)		-0.037 (0.024)	-0.038 (0.024)
North East			-0.029 (0.019)			-0.028 (0.019)
North West			-0.019 (0.012)			-0.018 (0.012)
Yorkshire and Humber			-0.020 (0.013)			-0.020 (0.012)
East Midlands			-0.041** (0.016)			-0.041** (0.016)
West Midlands			-0.021** (0.009)			-0.021** (0.009)
East of England			-0.015 (0.010)			-0.015 (0.010)
Class size			0.000 (0.002)			0.000 (0.002)
Constant	0.974*** (0.011)	0.961*** (0.029)	0.977*** (0.050)	0.971*** (0.013)	0.959*** (0.029)	0.974*** (0.050)
Observations	7938	7938	7938	7938	7938	7938

Robust standard errors clustered at the secondary school level reported in parentheses.

Significance: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Omitted groups: Degree; Employed; London; Married.

Table C.2.2: LPM and IV-2SLS estimates of peer effects on age 14 aspiration to follow academic/vocational route

	LPM			IV-2SLS		
	Spec 1 (1)	Spec 2 (2)	Spec 3 (3)	Spec 1 (4)	Spec 2 (5)	Spec 3 (6)
Peers' SEG	0.366*** (0.064)	0.345*** (0.064)	0.290*** (0.059)	0.356*** (0.084)	0.331*** (0.085)	0.281*** (0.080)
KS2 score	0.071*** (0.007)	0.068*** (0.007)	0.067*** (0.007)	0.072*** (0.007)	0.068*** (0.007)	0.067*** (0.007)
MP A levels	-0.055*** (0.015)	-0.052*** (0.015)	-0.049*** (0.015)	-0.055*** (0.016)	-0.052*** (0.015)	-0.050*** (0.015)
MP Other Qualification	-0.063*** (0.014)	-0.061*** (0.014)	-0.060*** (0.014)	-0.064*** (0.014)	-0.062*** (0.014)	-0.060*** (0.014)
MP No Qualification	-0.044** (0.019)	-0.045** (0.019)	-0.043** (0.018)	-0.044** (0.019)	-0.046** (0.019)	-0.044** (0.019)
MP Missing	-0.003 (0.030)	-0.000 (0.030)	-0.000 (0.030)	-0.003 (0.030)	-0.000 (0.030)	-0.000 (0.030)
SP A levels	0.014 (0.019)	0.017 (0.019)	0.017 (0.018)	0.013 (0.019)	0.016 (0.019)	0.017 (0.018)
SP Other Qualification	-0.013 (0.017)	-0.008 (0.017)	-0.007 (0.017)	-0.014 (0.017)	-0.009 (0.017)	-0.008 (0.017)
SP No Qualification	-0.024 (0.020)	-0.020 (0.020)	-0.019 (0.020)	-0.024 (0.020)	-0.020 (0.020)	-0.020 (0.020)
SP Missing	-0.001 (0.039)	0.002 (0.039)	0.005 (0.037)	-0.001 (0.039)	0.002 (0.039)	0.004 (0.037)
MP Self Employed	-0.013 (0.025)	-0.014 (0.025)	-0.016 (0.024)	-0.013 (0.025)	-0.014 (0.025)	-0.016 (0.024)
MP Unemployed	-0.061 (0.039)	-0.049 (0.040)	-0.035 (0.038)	-0.061 (0.039)	-0.050 (0.040)	-0.035 (0.038)
MP Out of the labour	-0.004 (0.014)	0.006 (0.014)	0.010 (0.014)	-0.004 (0.014)	0.006 (0.014)	0.009 (0.014)
MP Missing	-0.034 (0.059)	-0.047 (0.059)	-0.053 (0.059)	-0.034 (0.059)	-0.048 (0.059)	-0.054 (0.059)
SP Self Employed	0.006 (0.019)	0.005 (0.019)	0.002 (0.019)	0.007 (0.020)	0.006 (0.019)	0.002 (0.019)
SP Unemployed	0.058 (0.044)	0.063 (0.044)	0.078* (0.045)	0.057 (0.044)	0.063 (0.044)	0.078* (0.045)
SP Out of the labour	-0.009 (0.023)	-0.001 (0.023)	-0.003 (0.022)	-0.010 (0.023)	-0.001 (0.023)	-0.003 (0.022)
SP Missing	-0.057 (0.040)	-0.029 (0.043)	-0.031 (0.041)	-0.057 (0.040)	-0.029 (0.043)	-0.031 (0.041)
Female	0.002 (0.012)	0.004 (0.011)	0.004 (0.011)	0.002 (0.011)	0.003 (0.011)	0.004 (0.011)
White	-0.100*** (0.016)	-0.105*** (0.015)	-0.110*** (0.016)	-0.099*** (0.016)	-0.105*** (0.015)	-0.110*** (0.016)
MP's Age		0.001 (0.001)	0.002 (0.001)		0.001 (0.001)	0.002 (0.001)
SP's Age		0.001 (0.001)	0.001 (0.001)		0.001 (0.001)	0.001 (0.001)
Number of siblings		-0.013*** (0.004)	-0.013*** (0.004)		-0.013*** (0.004)	-0.013*** (0.004)
MP Single		-0.117*** (0.040)	-0.099** (0.040)		-0.117*** (0.040)	-0.099** (0.040)
MP Divorced/ Other		-0.050 (0.036)	-0.043 (0.036)		-0.050 (0.036)	-0.043 (0.036)
MP Missing		0.000 (0.089)	0.034 (0.088)		0.000 (0.089)	0.034 (0.088)
SP Single		-0.083 (0.096)	-0.071 (0.097)		-0.083 (0.096)	-0.071 (0.097)
SP Divorced/ Other		-0.035 (0.078)	-0.051 (0.077)		-0.035 (0.078)	-0.051 (0.077)
SP Missing		0.023 (0.039)	0.019 (0.039)		0.023 (0.039)	0.019 (0.039)
North East			0.048 (0.040)			0.047 (0.039)
North West			-0.027 (0.036)			-0.027 (0.036)
Yorkshire and Humber			0.039 (0.034)			0.039 (0.034)
East Midlands			0.048 (0.037)			0.048 (0.037)
West Midlands			-0.005 (0.024)			-0.005 (0.024)
East of England			0.032 (0.025)			0.032 (0.025)
Class size			-0.032*** (0.004)			-0.032*** (0.004)
Constant	0.782*** (0.023)	0.702*** (0.052)	1.387*** (0.108)	0.785*** (0.027)	0.704*** (0.052)	1.390*** (0.109)
Observations	6950	6950	6950	6950	6950	6950

Robust standard errors clustered at the secondary school level reported in parentheses.

Significance: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Omitted groups: Degree; Employed; London; Married.

Table C.2.3: LPM and IV-2SLS estimates of peer effects on age 16 aspiration to stay/leave FT education

	LPM			IV-2SLS		
	Spec 1 (1)	Spec 2 (2)	Spec 3 (3)	Spec 1 (4)	Spec 2 (5)	Spec 3 (6)
Peers' SEG	0.082*** (0.025)	0.069*** (0.025)	0.060** (0.026)	0.089*** (0.033)	0.073** (0.033)	0.063* (0.035)
KS2 score	0.058*** (0.004)	0.055*** (0.004)	0.055*** (0.004)	0.058*** (0.004)	0.055*** (0.004)	0.055*** (0.004)
MP A levels	-0.030*** (0.009)	-0.028*** (0.009)	-0.028*** (0.009)	-0.030*** (0.009)	-0.028*** (0.009)	-0.028*** (0.009)
MP Other Qualification	-0.045*** (0.008)	-0.043*** (0.008)	-0.043*** (0.008)	-0.045*** (0.008)	-0.043*** (0.008)	-0.043*** (0.008)
MP No Qualification	-0.051*** (0.010)	-0.052*** (0.010)	-0.052*** (0.010)	-0.051*** (0.011)	-0.051*** (0.011)	-0.052*** (0.011)
MP Missing	-0.016 (0.022)	-0.017 (0.022)	-0.017 (0.022)	-0.016 (0.022)	-0.017 (0.022)	-0.017 (0.022)
SP A levels	-0.010 (0.011)	-0.008 (0.011)	-0.008 (0.011)	-0.010 (0.011)	-0.008 (0.011)	-0.008 (0.011)
SP Other Qualification	-0.029*** (0.010)	-0.024** (0.010)	-0.024** (0.010)	-0.029*** (0.010)	-0.024** (0.010)	-0.024** (0.010)
SP No Qualification	-0.040*** (0.012)	-0.038*** (0.012)	-0.038*** (0.012)	-0.040*** (0.012)	-0.038*** (0.012)	-0.038*** (0.012)
SP Missing	0.005 (0.019)	0.007 (0.019)	0.006 (0.019)	0.005 (0.019)	0.007 (0.019)	0.006 (0.019)
MP Self Employed	0.002 (0.015)	0.001 (0.015)	0.003 (0.015)	0.002 (0.015)	0.001 (0.015)	0.002 (0.015)
MP Unemployed	-0.011 (0.023)	-0.006 (0.023)	-0.007 (0.022)	-0.011 (0.023)	-0.006 (0.023)	-0.007 (0.022)
MP Out of the labour	0.021*** (0.008)	0.025*** (0.008)	0.024*** (0.008)	0.021*** (0.008)	0.025*** (0.008)	0.024*** (0.008)
MP Missing	0.017 (0.029)	0.020 (0.030)	0.026 (0.030)	0.017 (0.029)	0.020 (0.030)	0.026 (0.030)
SP Self Employed	-0.010 (0.014)	-0.011 (0.014)	-0.011 (0.014)	-0.010 (0.014)	-0.011 (0.014)	-0.011 (0.014)
SP Unemployed	0.011 (0.024)	0.013 (0.024)	0.009 (0.024)	0.011 (0.024)	0.013 (0.024)	0.009 (0.024)
SP Out of the labour	0.026** (0.012)	0.028** (0.012)	0.031** (0.012)	0.026** (0.012)	0.028** (0.012)	0.031** (0.012)
SP Missing	-0.033* (0.019)	-0.027 (0.020)	-0.027 (0.021)	-0.033* (0.019)	-0.027 (0.020)	-0.027 (0.021)
Female	0.077*** (0.007)	0.077*** (0.007)	0.077*** (0.007)	0.077*** (0.007)	0.077*** (0.007)	0.077*** (0.007)
White	-0.127*** (0.008)	-0.130*** (0.008)	-0.120*** (0.009)	-0.127*** (0.008)	-0.130*** (0.008)	-0.120*** (0.009)
MP's Age		0.001 (0.001)	0.001 (0.001)		0.001 (0.001)	0.001 (0.001)
SP's Age		0.002*** (0.001)	0.002*** (0.001)		0.002*** (0.001)	0.002*** (0.001)
Number of siblings		-0.007*** (0.002)	-0.007*** (0.002)		-0.007*** (0.002)	-0.007*** (0.002)
MP Single		0.001 (0.026)	-0.001 (0.026)		0.001 (0.026)	-0.001 (0.026)
MP Divorced/ Other		0.041* (0.025)	0.041* (0.024)		0.041* (0.025)	0.041* (0.024)
MP Missing		-0.001 (0.055)	-0.009 (0.056)		-0.001 (0.055)	-0.009 (0.056)
SP Single		-0.104 (0.072)	-0.103 (0.071)		-0.104 (0.072)	-0.103 (0.071)
SP Divorced/ Other		0.034 (0.045)	0.031 (0.045)		0.034 (0.045)	0.031 (0.045)
SP Missing		-0.034 (0.025)	-0.034 (0.025)		-0.034 (0.025)	-0.034 (0.025)
North East			-0.047** (0.022)			-0.047** (0.022)
North West			-0.028** (0.012)			-0.028** (0.012)
Yorkshire and Humber			-0.044*** (0.014)			-0.044*** (0.014)
East Midlands			-0.026 (0.017)			-0.026 (0.017)
West Midlands			-0.013 (0.008)			-0.013 (0.008)
East of England			-0.030** (0.012)			-0.030** (0.012)
Class size			0.001 (0.002)			0.001 (0.002)
Constant	0.973*** (0.011)	0.878*** (0.032)	0.887*** (0.052)	0.971*** (0.013)	0.877*** (0.032)	0.886*** (0.053)
Observations	7938	7938	7938	7938	7938	7938

Robust standard errors clustered at the secondary school level reported in parentheses.

Significance: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Omitted groups: Degree; Employed; London; Married.

Table C.2.4: LPM and IV-2SLS estimates of peer effects on age 16 aspiration to follow academic/vocational route

	LPM			IV-2SLS		
	Spec 1 (1)	Spec 2 (2)	Spec 3 (3)	Spec 1 (4)	Spec 2 (5)	Spec 3 (6)
Peers' SEG	0.227*** (0.065)	0.208*** (0.066)	0.147** (0.065)	0.231*** (0.089)	0.210** (0.090)	0.148* (0.088)
KS2 score	0.138*** (0.007)	0.134*** (0.007)	0.131*** (0.007)	0.138*** (0.007)	0.134*** (0.007)	0.131*** (0.007)
MP A levels	-0.043*** (0.016)	-0.040** (0.015)	-0.036** (0.015)	-0.043*** (0.016)	-0.039** (0.015)	-0.036** (0.015)
MP Other Qualification	-0.068*** (0.013)	-0.064*** (0.013)	-0.061*** (0.013)	-0.068*** (0.013)	-0.064*** (0.013)	-0.061*** (0.013)
MP No Qualification	-0.038** (0.018)	-0.045** (0.018)	-0.042** (0.018)	-0.038** (0.018)	-0.045** (0.018)	-0.042** (0.018)
MP Missing	-0.032 (0.039)	-0.033 (0.039)	-0.031 (0.037)	-0.032 (0.039)	-0.033 (0.039)	-0.031 (0.037)
SP A levels	-0.019 (0.018)	-0.017 (0.018)	-0.018 (0.018)	-0.019 (0.018)	-0.016 (0.018)	-0.018 (0.018)
SP Other Qualification	-0.027* (0.016)	-0.022 (0.016)	-0.023 (0.016)	-0.027* (0.016)	-0.022 (0.016)	-0.023 (0.016)
SP No Qualification	-0.059*** (0.021)	-0.054*** (0.021)	-0.057*** (0.020)	-0.058*** (0.021)	-0.054*** (0.021)	-0.057*** (0.021)
SP Missing	-0.039 (0.039)	-0.034 (0.039)	-0.031 (0.038)	-0.039 (0.039)	-0.034 (0.039)	-0.031 (0.038)
MP Self Employed	0.019 (0.024)	0.013 (0.024)	0.014 (0.024)	0.019 (0.024)	0.013 (0.024)	0.014 (0.024)
MP Unemployed	-0.006 (0.036)	0.002 (0.036)	0.014 (0.036)	-0.006 (0.036)	0.002 (0.035)	0.014 (0.036)
MP Out of the labour	-0.011 (0.013)	-0.002 (0.013)	-0.002 (0.013)	-0.011 (0.013)	-0.002 (0.013)	-0.002 (0.013)
MP Missing	0.128** (0.057)	0.098* (0.056)	0.107* (0.055)	0.128** (0.057)	0.098* (0.056)	0.107* (0.055)
SP Self Employed	-0.004 (0.021)	-0.003 (0.021)	-0.006 (0.020)	-0.004 (0.021)	-0.004 (0.021)	-0.006 (0.020)
SP Unemployed	-0.062 (0.045)	-0.059 (0.045)	-0.056 (0.044)	-0.062 (0.045)	-0.059 (0.045)	-0.056 (0.044)
SP Out of the labour	0.043** (0.021)	0.041* (0.021)	0.043** (0.021)	0.043** (0.021)	0.041** (0.021)	0.043** (0.021)
SP Missing	-0.070* (0.041)	0.006 (0.044)	0.000 (0.043)	-0.070* (0.041)	0.006 (0.044)	0.000 (0.043)
Female	0.029** (0.012)	0.031*** (0.012)	0.031*** (0.011)	0.029** (0.012)	0.031*** (0.012)	0.031*** (0.011)
White	-0.188*** (0.016)	-0.191*** (0.015)	-0.167*** (0.016)	-0.189*** (0.016)	-0.192*** (0.016)	-0.167*** (0.017)
MP's Age		0.003*** (0.001)	0.004*** (0.001)		0.003*** (0.001)	0.004*** (0.001)
SP's Age		0.000 (0.001)	-0.000 (0.001)		0.000 (0.001)	-0.000 (0.001)
Number of siblings		-0.006 (0.004)	-0.005 (0.004)		-0.006 (0.004)	-0.005 (0.004)
MP Single		-0.104** (0.042)	-0.093** (0.042)		-0.104** (0.042)	-0.093** (0.042)
MP Divorced/ Other		-0.011 (0.039)	-0.006 (0.039)		-0.011 (0.039)	-0.006 (0.039)
MP Missing		-0.027 (0.087)	-0.012 (0.085)		-0.027 (0.087)	-0.012 (0.085)
SP Single		0.016 (0.096)	0.022 (0.095)		0.016 (0.096)	0.022 (0.095)
SP Divorced/ Other		-0.016 (0.079)	-0.043 (0.082)		-0.016 (0.079)	-0.043 (0.082)
SP Missing		-0.070* (0.038)	-0.075* (0.038)		-0.070* (0.038)	-0.075* (0.038)
North East			-0.045 (0.042)			-0.045 (0.042)
North West			-0.104*** (0.033)			-0.104*** (0.033)
Yorkshire and Humber			-0.054* (0.029)			-0.054* (0.029)
East Midlands			-0.054* (0.031)			-0.054* (0.031)
West Midlands			-0.058** (0.024)			-0.058** (0.024)
East of England			-0.060** (0.028)			-0.060** (0.028)
Class size			-0.030*** (0.004)			-0.030*** (0.004)
Constant	0.822*** (0.024)	0.688*** (0.052)	1.385*** (0.105)	0.821*** (0.028)	0.688*** (0.054)	1.385*** (0.106)
Observations	7053	7053	7053	7053	7053	7053

Robust standard errors clustered at the secondary school level reported in parentheses.

Significance: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Omitted groups: Degree; Employed; London; Married.

C.3 Peer effect: Average peers' educational aspirations

Table C.3.1: LPM and IV-2SLS estimates of peer effects on age 14 aspiration to stay/leave FT education

	LPM			IV-2SLS		
	Spec 1 (1)	Spec 2 (2)	Spec 3 (3)	Spec 1 (4)	Spec 2 (5)	Spec 3 (6)
Peers' Aspiration 1	0.220*** (0.043)	0.220*** (0.043)	0.212*** (0.045)	0.159 (0.120)	0.128 (0.124)	0.131 (0.130)
KS2 score	0.071*** (0.004)	0.069*** (0.004)	0.070*** (0.004)	0.072*** (0.005)	0.071*** (0.005)	0.071*** (0.005)
MP A levels	-0.013 (0.010)	-0.012 (0.010)	-0.012 (0.010)	-0.013 (0.010)	-0.013 (0.010)	-0.012 (0.010)
MP Other Qualification	-0.032*** (0.008)	-0.031*** (0.008)	-0.031*** (0.008)	-0.033*** (0.008)	-0.033*** (0.008)	-0.032*** (0.008)
MP No Qualification	-0.031*** (0.011)	-0.032*** (0.011)	-0.032*** (0.011)	-0.032*** (0.011)	-0.033*** (0.011)	-0.032*** (0.011)
MP Missing	0.008 (0.020)	0.007 (0.021)	0.008 (0.020)	0.007 (0.020)	0.006 (0.021)	0.007 (0.021)
SP A levels	-0.008 (0.011)	-0.008 (0.011)	-0.008 (0.011)	-0.009 (0.011)	-0.008 (0.011)	-0.009 (0.011)
SP Other Qualification	-0.011 (0.010)	-0.011 (0.010)	-0.011 (0.010)	-0.012 (0.010)	-0.012 (0.010)	-0.012 (0.010)
SP No Qualification	-0.018 (0.012)	-0.015 (0.012)	-0.015 (0.012)	-0.019 (0.012)	-0.016 (0.012)	-0.016 (0.012)
SP Missing	-0.002 (0.019)	-0.001 (0.019)	-0.001 (0.019)	-0.003 (0.019)	-0.001 (0.019)	-0.001 (0.019)
MP Self Employed	0.013 (0.013)	0.011 (0.013)	0.011 (0.013)	0.013 (0.013)	0.012 (0.013)	0.012 (0.013)
MP Unemployed	0.001 (0.021)	0.003 (0.021)	0.003 (0.021)	0.001 (0.021)	0.003 (0.021)	0.003 (0.021)
MP Out of the labour	0.003 (0.008)	0.008 (0.009)	0.008 (0.009)	0.003 (0.008)	0.008 (0.009)	0.007 (0.009)
MP Missing	-0.007 (0.030)	-0.013 (0.030)	-0.012 (0.030)	-0.007 (0.030)	-0.012 (0.030)	-0.011 (0.030)
SP Self Employed	-0.025* (0.014)	-0.023* (0.014)	-0.024* (0.014)	-0.025* (0.014)	-0.023* (0.014)	-0.024* (0.014)
SP Unemployed	-0.011 (0.024)	-0.008 (0.024)	-0.010 (0.024)	-0.010 (0.025)	-0.007 (0.025)	-0.009 (0.024)
SP Out of the labour	-0.007 (0.012)	-0.005 (0.013)	-0.005 (0.013)	-0.006 (0.012)	-0.004 (0.013)	-0.004 (0.013)
SP Missing	-0.026 (0.019)	-0.010 (0.021)	-0.010 (0.021)	-0.026 (0.019)	-0.010 (0.021)	-0.010 (0.021)
Female	0.066*** (0.006)	0.066*** (0.006)	0.066*** (0.006)	0.066*** (0.007)	0.067*** (0.007)	0.067*** (0.007)
White	-0.113*** (0.008)	-0.116*** (0.008)	-0.115*** (0.008)	-0.117*** (0.010)	-0.122*** (0.011)	-0.118*** (0.010)
MP's Age		0.001** (0.001)	0.001** (0.001)		0.001** (0.001)	0.001** (0.001)
SP's Age		-0.001 (0.001)	-0.001 (0.001)		-0.001 (0.001)	-0.001 (0.001)
Number of siblings		-0.005** (0.002)	-0.006** (0.002)		-0.005** (0.002)	-0.005** (0.002)
MP Single		-0.008 (0.025)	-0.010 (0.025)		-0.008 (0.025)	-0.010 (0.025)
MP Divorced/ Other		0.022 (0.024)	0.021 (0.024)		0.023 (0.024)	0.022 (0.024)
MP Missing		-0.007 (0.058)	-0.007 (0.058)		-0.005 (0.058)	-0.007 (0.058)
SP Single		0.015 (0.055)	0.015 (0.054)		0.012 (0.055)	0.013 (0.055)
SP Divorced/ Other		0.090*** (0.031)	0.089*** (0.031)		0.088*** (0.031)	0.087*** (0.032)
SP Missing		-0.036 (0.024)	-0.036 (0.024)		-0.037 (0.024)	-0.036 (0.024)
North East			-0.014 (0.016)			-0.020 (0.020)
North West			-0.003 (0.011)			-0.009 (0.015)
Yorkshire and Humber			-0.007 (0.011)			-0.013 (0.014)
East Midlands			-0.026* (0.014)			-0.031* (0.017)
West Midlands			-0.006 (0.008)			-0.011 (0.012)
East of England			-0.001 (0.010)			-0.006 (0.013)
Class size			0.000 (0.001)			0.000 (0.002)
Constant	0.779*** (0.041)	0.775*** (0.048)	0.780*** (0.065)	0.837*** (0.111)	0.854*** (0.111)	0.858*** (0.137)
Observations	7938	7938	7938	7938	7938	7938

Robust standard errors clustered at the secondary school level reported in parentheses.

Significance: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.
Omitted groups: Degree; Employed; London; Married.

Table C.3.2: LPM and IV-2SLS estimates of peer effects on age 14 aspiration to follow academic/vocational route

	LPM			IV-2SLS		
	Spec 1 (1)	Spec 2 (2)	Spec 3 (3)	Spec 1 (4)	Spec 2 (5)	Spec 3 (6)
Peers' Aspiration 2	0.747*** (0.021)	0.741*** (0.021)	0.707*** (0.023)	0.641*** (0.081)	0.592*** (0.085)	0.551*** (0.095)
KS2 score	0.060*** (0.006)	0.056*** (0.006)	0.057*** (0.006)	0.063*** (0.007)	0.060*** (0.007)	0.061*** (0.007)
MP A levels	-0.051*** (0.015)	-0.048*** (0.015)	-0.048*** (0.015)	-0.053*** (0.015)	-0.050*** (0.015)	-0.049*** (0.015)
MP Other Qualification	-0.052*** (0.013)	-0.050*** (0.013)	-0.050*** (0.013)	-0.056*** (0.014)	-0.055*** (0.014)	-0.055*** (0.014)
MP No Qualification	-0.041** (0.017)	-0.040** (0.017)	-0.040** (0.017)	-0.045*** (0.018)	-0.046*** (0.018)	-0.045** (0.018)
MP Missing	-0.016 (0.029)	-0.014 (0.029)	-0.013 (0.029)	-0.014 (0.029)	-0.010 (0.028)	-0.010 (0.029)
SP A levels	0.012 (0.017)	0.015 (0.017)	0.015 (0.017)	0.011 (0.017)	0.014 (0.017)	0.014 (0.017)
SP Other Qualification	-0.018 (0.015)	-0.013 (0.015)	-0.013 (0.015)	-0.021 (0.015)	-0.016 (0.015)	-0.015 (0.015)
SP No Qualification	-0.030 (0.018)	-0.025 (0.018)	-0.025 (0.018)	-0.032* (0.018)	-0.028 (0.018)	-0.027 (0.018)
SP Missing	-0.003 (0.032)	-0.000 (0.032)	0.001 (0.032)	-0.004 (0.033)	-0.001 (0.033)	0.000 (0.033)
MP Self Employed	-0.006 (0.022)	-0.007 (0.022)	-0.009 (0.022)	-0.006 (0.022)	-0.007 (0.022)	-0.010 (0.022)
MP Unemployed	-0.046 (0.033)	-0.036 (0.034)	-0.032 (0.033)	-0.049 (0.034)	-0.040 (0.035)	-0.033 (0.034)
MP Out of the labour	0.005 (0.013)	0.015 (0.013)	0.016 (0.013)	0.003 (0.013)	0.012 (0.013)	0.014 (0.013)
MP Missing	-0.019 (0.053)	-0.024 (0.053)	-0.029 (0.053)	-0.026 (0.053)	-0.034 (0.054)	-0.039 (0.054)
SP Self Employed	0.008 (0.017)	0.007 (0.017)	0.006 (0.017)	0.009 (0.018)	0.008 (0.018)	0.006 (0.017)
SP Unemployed	0.054 (0.046)	0.060 (0.046)	0.067 (0.046)	0.054 (0.045)	0.059 (0.045)	0.069 (0.045)
SP Out of the labour	-0.009 (0.020)	-0.001 (0.020)	-0.003 (0.020)	-0.011 (0.020)	-0.003 (0.020)	-0.004 (0.020)
SP Missing	-0.052 (0.032)	-0.043 (0.034)	-0.044 (0.034)	-0.055* (0.033)	-0.042 (0.035)	-0.042 (0.035)
Female	0.004 (0.010)	0.005 (0.010)	0.005 (0.010)	0.003 (0.010)	0.004 (0.010)	0.005 (0.010)
White	-0.054*** (0.011)	-0.061*** (0.011)	-0.072*** (0.012)	-0.059*** (0.012)	-0.068*** (0.012)	-0.078*** (0.013)
MP's Age		0.001 (0.001)	0.001 (0.001)		0.001 (0.001)	0.001 (0.001)
SP's Age		0.001 (0.001)	0.001 (0.001)		0.001 (0.001)	0.001 (0.001)
Number of siblings		-0.013*** (0.004)	-0.013*** (0.004)		-0.013*** (0.004)	-0.013*** (0.004)
MP Single		-0.087** (0.038)	-0.081** (0.039)		-0.094** (0.039)	-0.086** (0.039)
MP Divorced/ Other		-0.030 (0.034)	-0.029 (0.034)		-0.034 (0.034)	-0.032 (0.035)
MP Missing		-0.004 (0.088)	0.010 (0.089)		-0.002 (0.087)	0.017 (0.087)
SP Single		-0.079 (0.081)	-0.076 (0.083)		-0.083 (0.084)	-0.077 (0.085)
SP Divorced/ Other		-0.052 (0.075)	-0.053 (0.075)		-0.050 (0.075)	-0.054 (0.075)
SP Missing		0.028 (0.036)	0.028 (0.037)		0.026 (0.037)	0.025 (0.037)
North East			0.046** (0.020)			0.043* (0.024)
North West			0.012 (0.014)			0.000 (0.020)
Yorkshire and Humber			0.028* (0.016)			0.028 (0.019)
East Midlands			0.027* (0.015)			0.032 (0.020)
West Midlands			0.023* (0.012)			0.016 (0.015)
East of England			0.031** (0.013)			0.031** (0.015)
Class size			-0.009*** (0.002)			-0.015*** (0.004)
Constant	0.275*** (0.022)	0.207*** (0.049)	0.413*** (0.070)	0.373*** (0.068)	0.331*** (0.077)	0.681*** (0.163)
Observations	6950	6950	6950	6950	6950	6950

Robust standard errors clustered at the secondary school level reported in parentheses.

Significance: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Omitted groups: Degree; Employed; London; Married.

Table C.3.3: LPM and IV-2SLS estimates of peer effects on age 16 aspiration to stay/leave FT education

	LPM			IV-2SLS		
	Spec 1 (1)	Spec 2 (2)	Spec 3 (3)	Spec 1 (4)	Spec 2 (5)	Spec 3 (6)
Peers' Aspiration 3	0.249*** (0.044)	0.237*** (0.044)	0.213*** (0.048)	0.345*** (0.117)	0.264** (0.123)	0.232* (0.137)
KS2 score	0.057*** (0.004)	0.054*** (0.004)	0.054*** (0.004)	0.055*** (0.004)	0.054*** (0.004)	0.054*** (0.004)
MP A levels	-0.030*** (0.009)	-0.028*** (0.009)	-0.028*** (0.009)	-0.029*** (0.010)	-0.028*** (0.009)	-0.028*** (0.009)
MP Other Qualification	-0.043*** (0.008)	-0.041*** (0.008)	-0.041*** (0.008)	-0.041*** (0.009)	-0.040*** (0.008)	-0.040*** (0.008)
MP No Qualification	-0.053*** (0.010)	-0.053*** (0.010)	-0.053*** (0.010)	-0.052*** (0.010)	-0.052*** (0.010)	-0.052*** (0.010)
MP Missing	-0.015 (0.021)	-0.016 (0.021)	-0.017 (0.021)	-0.015 (0.021)	-0.016 (0.021)	-0.016 (0.021)
SP A levels	-0.012 (0.011)	-0.009 (0.011)	-0.009 (0.011)	-0.011 (0.011)	-0.008 (0.011)	-0.009 (0.011)
SP Other Qualification	-0.030*** (0.010)	-0.025** (0.010)	-0.024** (0.010)	-0.028*** (0.010)	-0.024** (0.010)	-0.024** (0.010)
SP No Qualification	-0.042*** (0.012)	-0.039*** (0.012)	-0.039*** (0.012)	-0.041*** (0.012)	-0.039*** (0.012)	-0.039*** (0.012)
SP Missing	0.006 (0.019)	0.007 (0.019)	0.006 (0.019)	0.006 (0.019)	0.007 (0.019)	0.006 (0.019)
MP Self Employed	0.002 (0.015)	0.002 (0.015)	0.002 (0.015)	0.002 (0.015)	0.001 (0.015)	0.002 (0.015)
MP Unemployed	-0.014 (0.023)	-0.009 (0.022)	-0.009 (0.022)	-0.015 (0.022)	-0.009 (0.022)	-0.010 (0.022)
MP Out of the labour	0.020*** (0.008)	0.024*** (0.008)	0.024*** (0.008)	0.020*** (0.008)	0.025*** (0.008)	0.024*** (0.008)
MP Missing	0.011 (0.029)	0.015 (0.029)	0.020 (0.029)	0.010 (0.029)	0.015 (0.029)	0.019 (0.029)
SP Self Employed	-0.007 (0.013)	-0.008 (0.013)	-0.008 (0.014)	-0.006 (0.013)	-0.008 (0.013)	-0.008 (0.014)
SP Unemployed	0.006 (0.024)	0.008 (0.024)	0.007 (0.024)	0.005 (0.024)	0.008 (0.024)	0.007 (0.024)
SP Out of the labour	0.024** (0.012)	0.027** (0.012)	0.029** (0.012)	0.025** (0.012)	0.027** (0.012)	0.029** (0.012)
SP Missing	-0.034* (0.019)	-0.029 (0.020)	-0.029 (0.021)	-0.034* (0.019)	-0.030 (0.020)	-0.029 (0.020)
Female	0.075*** (0.007)	0.075*** (0.007)	0.075*** (0.007)	0.074*** (0.007)	0.075*** (0.007)	0.075*** (0.007)
White	-0.107*** (0.008)	-0.111*** (0.008)	-0.108*** (0.008)	-0.099*** (0.011)	-0.109*** (0.012)	-0.107*** (0.010)
MP's Age		0.001 (0.001)	0.001 (0.001)		0.001 (0.001)	0.001 (0.001)
SP's Age		0.002*** (0.001)	0.002*** (0.001)		0.002*** (0.001)	0.002*** (0.001)
Number of siblings		-0.007*** (0.002)	-0.007*** (0.002)		-0.007*** (0.002)	-0.007*** (0.002)
MP Single		0.000 (0.026)	-0.001 (0.026)		0.000 (0.026)	-0.001 (0.026)
MP Divorced/ Other		0.041* (0.025)	0.040* (0.024)		0.041* (0.025)	0.040* (0.024)
MP Missing		-0.002 (0.054)	-0.007 (0.054)		-0.003 (0.054)	-0.007 (0.054)
SP Single		-0.103 (0.071)	-0.102 (0.071)		-0.102 (0.070)	-0.101 (0.070)
SP Divorced/ Other		0.034 (0.045)	0.033 (0.045)		0.034 (0.045)	0.033 (0.044)
SP Missing		-0.032 (0.025)	-0.031 (0.025)		-0.032 (0.025)	-0.031 (0.025)
North East			-0.026 (0.019)			-0.022 (0.024)
North West			-0.014 (0.010)			-0.012 (0.014)
Yorkshire and Humber			-0.028** (0.012)			-0.025 (0.016)
East Midlands			-0.010 (0.014)			-0.008 (0.017)
West Midlands			-0.002 (0.007)			-0.000 (0.010)
East of England			-0.015 (0.010)			-0.012 (0.013)
Class size			0.001 (0.001)			0.001 (0.001)
Constant	0.755*** (0.041)	0.674*** (0.050)	0.691*** (0.067)	0.652*** (0.113)	0.638*** (0.115)	0.659*** (0.147)
Observations	7938	7938	7938	7938	7938	7938

Robust standard errors clustered at the secondary school level reported in parentheses.

Significance: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Omitted groups: Degree; Employed; London; Married.

Table 4: LPM and IV-2SLS estimates of peer effects on age 16 aspiration to follow academic/vocational route

	LPM			IV-2SLS		
	Spec 1 (1)	Spec 2 (2)	Spec 3 (3)	Spec 1 (4)	Spec 2 (5)	Spec 3 (6)
Peers' Aspiration 4	0.633*** (0.027)	0.626*** (0.027)	0.592*** (0.029)	0.441*** (0.090)	0.400*** (0.094)	0.340*** (0.108)
KS2 score	0.124*** (0.007)	0.120*** (0.007)	0.120*** (0.007)	0.130*** (0.007)	0.127*** (0.007)	0.126*** (0.007)
MP A levels	-0.036** (0.015)	-0.032** (0.015)	-0.031** (0.015)	-0.040*** (0.015)	-0.037** (0.015)	-0.035** (0.015)
MP Other Qualification	-0.055*** (0.013)	-0.051*** (0.013)	-0.050*** (0.013)	-0.062*** (0.013)	-0.059*** (0.013)	-0.057*** (0.013)
MP No Qualification	-0.035** (0.017)	-0.039** (0.017)	-0.038** (0.017)	-0.041** (0.017)	-0.046*** (0.017)	-0.043** (0.017)
MP Missing	-0.011 (0.032)	-0.011 (0.033)	-0.012 (0.032)	-0.018 (0.034)	-0.020 (0.034)	-0.021 (0.034)
SP A levels	-0.025 (0.017)	-0.023 (0.017)	-0.023 (0.017)	-0.025 (0.017)	-0.022 (0.017)	-0.022 (0.017)
SP Other Qualification	-0.024 (0.015)	-0.020 (0.015)	-0.020 (0.015)	-0.029* (0.015)	-0.024 (0.015)	-0.024 (0.015)
SP No Qualification	-0.056*** (0.019)	-0.052*** (0.019)	-0.052*** (0.019)	-0.061*** (0.019)	-0.057*** (0.019)	-0.058*** (0.019)
SP Missing	-0.023 (0.033)	-0.018 (0.033)	-0.018 (0.033)	-0.028 (0.034)	-0.025 (0.034)	-0.024 (0.035)
MP Self Employed	0.028 (0.021)	0.022 (0.022)	0.021 (0.022)	0.026 (0.022)	0.019 (0.022)	0.018 (0.022)
MP Unemployed	-0.004 (0.034)	0.004 (0.034)	0.008 (0.034)	-0.006 (0.034)	0.002 (0.034)	0.010 (0.035)
MP Out of the labour	-0.006 (0.012)	0.002 (0.012)	0.003 (0.012)	-0.009 (0.012)	-0.000 (0.012)	-0.000 (0.012)
MP Missing	0.120** (0.051)	0.094* (0.051)	0.096* (0.051)	0.119** (0.052)	0.091* (0.052)	0.098* (0.053)
SP Self Employed	-0.002 (0.019)	-0.002 (0.019)	-0.003 (0.019)	-0.001 (0.019)	-0.001 (0.019)	-0.003 (0.019)
SP Unemployed	-0.068* (0.041)	-0.064 (0.041)	-0.061 (0.041)	-0.068 (0.042)	-0.063 (0.042)	-0.059 (0.042)
SP Out of the labour	0.042** (0.018)	0.040** (0.018)	0.040** (0.018)	0.040** (0.019)	0.038** (0.019)	0.040** (0.019)
SP Missing	-0.077** (0.033)	-0.011 (0.036)	-0.012 (0.036)	-0.077** (0.034)	-0.007 (0.038)	-0.008 (0.038)
Female	0.028*** (0.010)	0.029*** (0.010)	0.030*** (0.010)	0.028*** (0.010)	0.030*** (0.010)	0.030*** (0.011)
White	-0.122*** (0.012)	-0.126*** (0.012)	-0.126*** (0.013)	-0.140*** (0.015)	-0.147*** (0.015)	-0.142*** (0.016)
MP's Age		0.003*** (0.001)	0.003*** (0.001)		0.003*** (0.001)	0.003*** (0.001)
SP's Age		-0.000 (0.001)	-0.000 (0.001)		-0.000 (0.001)	-0.000 (0.001)
Number of siblings		-0.006 (0.004)	-0.006 (0.004)		-0.007* (0.004)	-0.006 (0.004)
MP Single		-0.088** (0.041)	-0.085** (0.041)		-0.094** (0.041)	-0.088** (0.041)
MP Divorced/ Other		-0.013 (0.037)	-0.012 (0.037)		-0.012 (0.037)	-0.009 (0.037)
MP Missing		-0.043 (0.083)	-0.035 (0.083)		-0.036 (0.084)	-0.023 (0.083)
SP Single		-0.004 (0.099)	0.000 (0.098)		0.000 (0.097)	0.008 (0.096)
SP Divorced/ Other		-0.059 (0.077)	-0.063 (0.078)		-0.043 (0.077)	-0.055 (0.079)
SP Missing		-0.061* (0.037)	-0.062* (0.037)		-0.065* (0.037)	-0.068* (0.037)
North East			-0.004 (0.020)			-0.026 (0.032)
North West			-0.022 (0.017)			-0.061** (0.027)
Yorkshire and Humber			-0.005 (0.015)			-0.029 (0.022)
East Midlands			-0.014 (0.016)			-0.032 (0.023)
West Midlands			-0.006 (0.013)			-0.029 (0.019)
East of England			-0.006 (0.015)			-0.030 (0.022)
Class size			-0.010*** (0.002)			-0.019*** (0.005)
Constant	0.381*** (0.029)	0.280*** (0.052)	0.519*** (0.073)	0.543*** (0.073)	0.448*** (0.084)	0.934*** (0.193)
Observations	7053	7053	7053	7053	7053	7053

Robust standard errors clustered at the secondary school level reported in parentheses.

Significance: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Omitted groups: Degree; Employed; London; Married.

D Sensitivity Analyses

Table D.1: Sensitivity analysis to excluding observations from small secondary schools (<700 students)

	Preliminary aspirations: age 14				Later aspirations: age 16			
	Stay/Leave FT Ed		Acad/Voc route		Stay/Leave FT Ed		Acad/Voc route	
	LPM	IV-2SLS	LPM	IV-2SLS	LPM	IV-2SLS	LPM	IV-2SLS
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Peers' Average KS3 scores	0.006 (0.003)	0.003 (0.006)	0.041*** (0.008)	0.033** (0.013)	0.009** (0.004)	0.009 (0.006)	0.023*** (0.007)	0.026** (0.013)
Peers' SEG	0.062** (0.025)	0.073** (0.037)	0.263*** (0.060)	0.263*** (0.083)	0.066** (0.027)	0.062* (0.036)	0.111* (0.065)	0.103 (0.091)
Peers' Average Aspirations	0.200*** (0.046)	0.158 (0.127)	0.685*** (0.025)	0.514*** (0.111)	0.235*** (0.049)	0.269** (0.136)	0.584*** (0.031)	0.305** (0.119)
Observations	7326	7326	6413	6413	7326	7326	6502	6502

Robust standard errors clustered at the secondary school level are reported in in parentheses.

Significance: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. Included but not shown: Specification 3 variables.

Table D.2: Sensitivity analysis to excluding schools with less than 10 LSYPE individuals

	Preliminary aspirations: age 14				Later aspirations: age 16			
	Stay/Leave FT Ed		Acad/Voc route		Stay/Leave FT Ed		Acad/Voc route	
	LPM	IV-2SLS	LPM	IV-2SLS	LPM	IV-2SLS	LPM	IV-2SLS
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Peers' Average KS3 scores	0.003 (0.004)	0.003 (0.007)	0.039*** (0.008)	0.041*** (0.014)	0.010*** (0.004)	0.011* (0.007)	0.020** (0.008)	0.023 (0.014)
Peers' SEG	0.043 (0.028)	0.038 (0.038)	0.278*** (0.062)	0.277*** (0.084)	0.060** (0.028)	0.068* (0.036)	0.112 (0.068)	0.074 (0.092)
Peers' Average Aspirations	0.186*** (0.050)	0.099 (0.142)	0.705*** (0.024)	0.566*** (0.097)	0.191*** (0.053)	0.297** (0.129)	0.595*** (0.031)	0.243* (0.126)
Observations	7366	7366	6446	6446	7366	7366	6540	6540

Robust standard errors clustered at the secondary school level are reported in in parentheses.

Significance: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. Included but not shown: Specification 3 variables.

Table D.3: Sensitivity analysis to including only individuals who have more than 1 peer of peer

	Preliminary aspirations: age 14				Later aspirations: age 16			
	Stay/Leave FT Ed		Acad/Voc route		Stay/Leave FT Ed		Acad/Voc route	
	LPM	IV-2SLS	LPM	IV-2SLS	LPM	IV-2SLS	LPM	IV-2SLS
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Peers' Average KS3 scores	0.003 (0.004)	0.002 (0.007)	0.047*** (0.008)	0.040** (0.015)	0.008** (0.004)	0.007 (0.007)	0.024*** (0.008)	0.025* (0.015)
Peers' SEG	0.030 (0.029)	0.023 (0.042)	0.268*** (0.061)	0.268*** (0.085)	0.047* (0.028)	0.062 (0.039)	0.117* (0.070)	0.121 (0.102)
Peers' Average Aspirations	0.236*** (0.047)	0.067 (0.168)	0.699*** (0.024)	0.546*** (0.106)	0.236*** (0.050)	0.258 (0.160)	0.594*** (0.032)	0.323** (0.137)
Observations	7045	7045	6194	6194	7045	7045	6266	6266

Robust standard errors clustered at the secondary school level are reported in in parentheses.

Significance: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. Included but not shown: Specification 3 variables.

48

Table D.4: Sensitivity analysis to including only individuals who have 5 or more peers of peers

	Preliminary aspirations: age 14				Later aspirations: age 16			
	Stay/Leave FT Ed		Acad/Voc route		Stay/Leave FT Ed		Acad/Voc route	
	LPM	IV-2SLS	LPM	IV-2SLS	LPM	IV-2SLS	LPM	IV-2SLS
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Peers' Average KS3 scores	0.004 (0.005)	0.003 (0.008)	0.053*** (0.008)	0.055*** (0.017)	0.008** (0.004)	0.005 (0.007)	0.026*** (0.008)	0.024 (0.017)
Peers' SEG	-0.004 (0.031)	-0.049 (0.047)	0.279*** (0.068)	0.327*** (0.100)	0.015 (0.029)	0.018 (0.043)	0.071 (0.079)	0.048 (0.121)
Peers' Average Aspirations	0.201*** (0.055)	0.062 (0.188)	0.700*** (0.027)	0.656*** (0.100)	0.158*** (0.047)	0.173 (0.220)	0.585*** (0.037)	0.316* (0.170)
Observations	5677	5677	5032	5032	5677	5677	5086	5086

Robust standard errors clustered at the secondary school level are reported in in parentheses.

Significance: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. Included but not shown: Specification 3 variables.

Table D.5: Sensitivity analysis to including only individuals who have 10 or more peers of peers

	Preliminary aspirations: age 14				Later aspirations: age 16			
	Stay/Leave FT Ed		Acad/Voc route		Stay/Leave FT Ed		Acad/Voc route	
	LPM	IV-2SLS	LPM	IV-2SLS	LPM	IV-2SLS	LPM	IV-2SLS
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Peers' Average KS3 scores	0.008*	0.002	0.051***	0.069***	0.013***	0.007	0.036***	0.040**
	(0.004)	(0.009)	(0.009)	(0.018)	(0.004)	(0.009)	(0.009)	(0.017)
Peers' SEG	-0.008	-0.055	0.271***	0.369***	0.045	0.039	0.048	0.101
	(0.038)	(0.059)	(0.070)	(0.113)	(0.033)	(0.049)	(0.086)	(0.141)
Peers' Average Aspirations	0.182***	0.125	0.674***	0.790***	0.222***	0.417	0.538***	0.594***
	(0.063)	(0.263)	(0.034)	(0.115)	(0.059)	(0.383)	(0.051)	(0.162)
Observations	4023	4023	3642	3642	4023	4023	3663	3663

Robust standard errors clustered at the secondary school level are reported in in parentheses.

Significance: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. Included but not shown: Specification 3 variables.

Table D.6: Sensitivity analysis to including only individuals who have 15 or more peers of peers

	Preliminary aspirations: age 14				Later aspirations: age 16			
	Stay/Leave FT Ed		Acad/Voc route		Stay/Leave FT Ed		Acad/Voc route	
	LPM	IV-2SLS	LPM	IV-2SLS	LPM	IV-2SLS	LPM	IV-2SLS
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Peers' Average KS3 scores	0.012**	0.010	0.045***	0.062**	0.008	-0.001	0.043***	0.046*
	(0.005)	(0.011)	(0.012)	(0.024)	(0.006)	(0.012)	(0.012)	(0.025)
Peers' SEG	0.019	0.042	0.288***	0.271	0.037	0.037	0.090	0.100
	(0.042)	(0.070)	(0.093)	(0.180)	(0.041)	(0.066)	(0.114)	(0.218)
Peers' Average Aspirations	0.196**	0.390	0.651***	0.606***	0.171**	-0.295	0.559***	0.681***
	(0.077)	(0.348)	(0.042)	(0.135)	(0.071)	(0.856)	(0.063)	(0.241)
Observations	2641	2641	2397	2397	2641	2641	2423	2423

Robust standard errors clustered at the secondary school level are reported in in parentheses.

Significance: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. Included but not shown: Specification 3 variables.

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