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Access to grammar schools by socio-economic status

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The current UK government has recently (May, 2018) allocated an extra £50million of funding to allow selective schools in England to expand,¹ with the apparent aim of promoting social mobility. Yet the 2016 Department for Education consultation, ‘Schools that work for everyone’, highlighted that there is no clear understanding of the number of children from ordinary, working families attending selective schools (grammar schools).² We document for the first time the differences in the likelihood of attending a grammar school across the full range of socio-economic status (SES) in England, using a broad-based measure. While a lot of work (Andrews et al., 2016, Andrews and Hutchinson, 2016, Cribb et al., 2013) has conclusively demonstrated strong inequalities across the binary divide of a poverty line, our index provides new evidence assessing inequalities within the 85% non-poor population.³ We compare access to grammar schools across the distribution of SES and prior attainment at Key Stage 2, a high-stakes test taken by all pupils at the end of primary school.

We use data from the National Pupil Database, a census of pupils attending state schools in England, focusing on those who took their GCSEs between 2003 and 2006. SES is defined based on a combination of measures including eligibility for free school meals, index of multiple deprivation (IMD) scores, ACORN categories (based on the socio-economic characteristics, financial holdings and property details of the 15 nearest households), and the proportion of the nearest 150 households working in professional or managerial occupations, with education at Level 3 or above and who own their own home.⁴ Pupils are then assigned to a) a percentile or b) a quintile, based on their relative place in the distribution of SES. We designate an area as “selective” if more than 20% of each academic cohort attends a grammar school. 11 of the 150 local education authorities in England are classified as selective, with roughly 9% of our cohorts living in selective areas.

Figure 1 focuses on students living in selective areas and plots the percentage of students from each percentile of the SES distribution (1=most deprived; 100=least deprived) that attend a grammar school. It shows that access to grammar schools is highly skewed across the distribution of SES. Just 6% of those at the 10th percentile of our measure of SES attend a grammar school. This increases slowly for the bottom half of the SES distribution, with only 9% of those at the 20th percentile and only 17% of those at the 40th percentile (broadly the range of the ‘just about managing’ group)⁵ attending a grammar school. For those from median SES families, 23% attend a grammar school, and at the 75th percentile, 33% attend. Contrast this to pupils from the richest 10% of families: 51% of those at the 90th percentile of SES attend a grammar school and 79% of the top 1% of our SES distribution attend a grammar school.

¹ The expansion equates to around 2000 more places, or, spread over 7 cohorts fewer than 300 new places for each cohort of 650,000 pupils.

² Grammar schools select pupils through an entry exam. See <https://www.gov.uk/types-of-school>

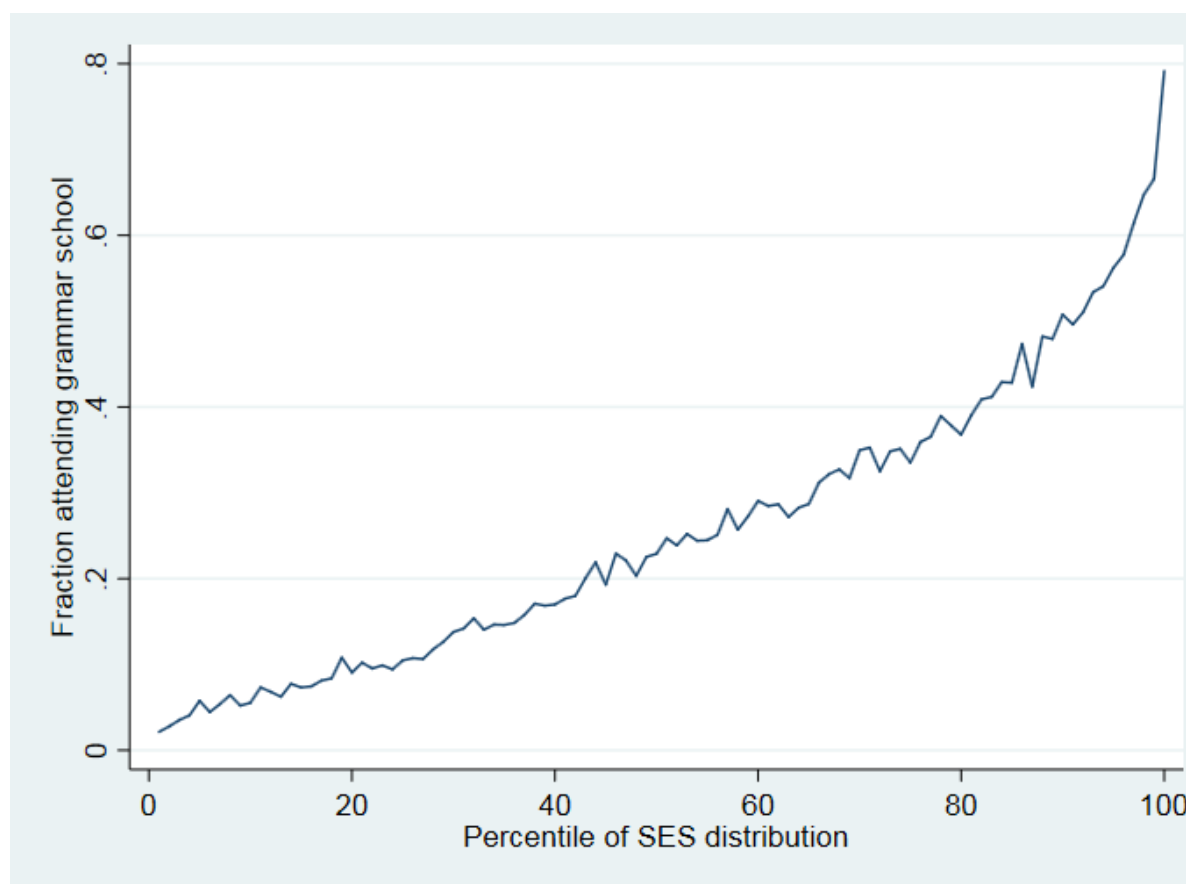
³ Note that Cribb et al. (2013) and Cullinane (2016) also consider variation in access to grammar schools within the 85% non-poor population, although they both use IDACI quintiles, which are more limited than what is offered here.

⁴ See Chowdry et al. (2013) for further details.

⁵ Theresa May: “It means putting government firmly on the side of not only the poorest in our society, important though that is and will remain, but also of those in Britain who are working hard but just about managing.”

<http://www.newstatesman.com/politics/education/2016/09/full-text-theresa-mays-speech-grammar-schools> . Possible definitions of the “just about managing” are discussed here: <http://www.bbc.co.uk/news/uk-politics-38049245>. In our data, we use a definition of between the 20th and 40th percentile of the SES distribution.

Figure 1: Proportion attending grammar schools in selective areas by Socio-Economic Status of family



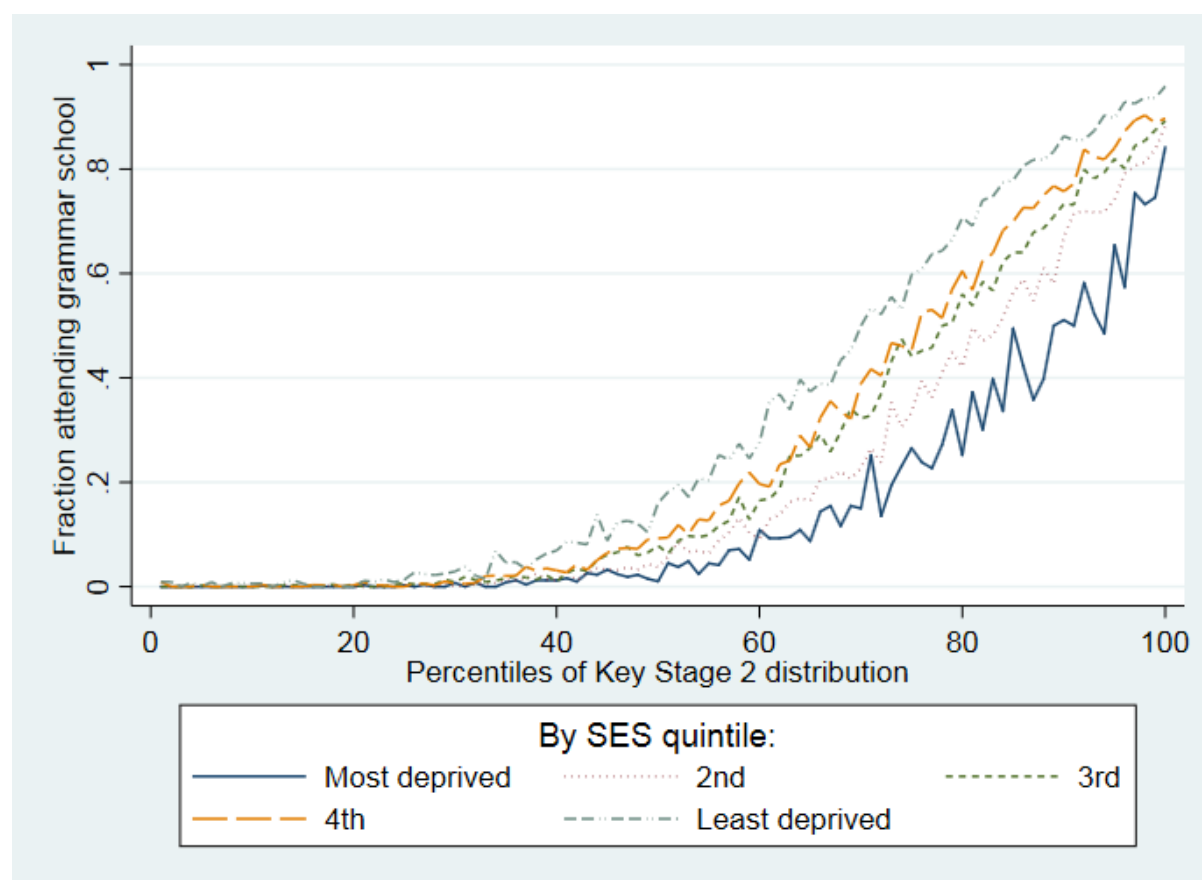
Consistent with previous evidence, this suggests that systems that rely on ‘selection by ability’ provide very limited opportunities for those from the most deprived backgrounds to attend selective schools. Our figures suggest that less than 1% of those attending grammar schools in selective areas come from the most deprived 10% of families, compared with a quarter from the most affluent 10%. Our analysis also suggests that those from ‘just about managing’ families, and indeed those from the middle of the SES distribution, also have very limited access to grammar schools, with half of the places in these schools taken by those from the most affluent 25% of families.

Of course, there is a positive association between SES and prior attainment. The question is: to what extent does this pattern of grammar school access reflect socio-economic differences in the likelihood of passing the entrance exam, and to what extent might there be differences by socio-economic background over and above these differences in prior attainment? To answer this question, Figure 2 plots the percentage of students from each percentile of the Key Stage 2 distribution that attend a grammar school, illustrating how this percentage varies by SES quintile. We use an average of the students’ marks in externally assessed English, maths and science tests to calculate a continuous measure of performance at Key Stage 2, and split pupils into percentiles on the basis of their position in this distribution. We again focus on pupils in selective areas only.

Figure 2 shows that while there is little chance of attending a grammar school if you score in the bottom half of Key Stage 2 scores (1=lowest score; 100=highest score), regardless of socio-economic background, even for those at the 50th percentile of Key Stage 2 attainment there is

a gap in access by SES. Pupils from the 20% most affluent families are 15 percentage points more likely to attend a grammar school than those from the 20% poorest families, who essentially have no chance of attending a grammar school with this level of Key Stage 2 performance. As we move up the attainment distribution, these disparities get wider, with a 35 percentage point advantage for richer families at the 70th percentile of Key Stage 2 performance (50% vs. 15%), and a 45 percentage point advantage at the 80th percentile (70% vs. 25%). The gap narrows slightly amongst very high performing children, but pupils from poorer families who score at the 90th percentile at Key Stage 2 are still 35 percentage points less likely to attend a grammar school than those from the richest families (51% vs. 86%). The figures suggest that a pupil living in a selective area from the most deprived quintile scoring at the 90th percentile at Key Stage 2 only has a 50/50 chance of attending a grammar school, compared to a pupil from the least deprived quintile with a similar Key Stage 2 score who will be admitted 6 times out of 7.

Figure 2: Proportion attending grammar schools in selective areas by SES quintile and Key Stage 2 performance



To summarise, access to grammar schools within selective areas is strongly socially graded and this is not purely driven by the positive association between SES and attainment. Even comparing pupils who achieve similarly at Key Stage 2, there are large differences in the chances of attending a grammar school within a selective area by SES. Our analysis cannot tell us to what extent this reflects differences in the likelihood of applying for a grammar school by SES vs. differences in the likelihood of being admitted to a grammar school by SES, but it is clear that selective education cannot be viewed as a vehicle for promoting the life chances of the majority of lower or even middle class children.

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