# Open Access

An independent evaluation

Social Market Foundation

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Any errors or omissions remain those of the authors.

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# FOREWORD

When I set up the Sutton Trust seventeen years ago, I did so out of a sense of outrage at the waste of talent in Britain.

I gained an Oxford education and a successful business career largely thanks to the fact that I had access to a free education at a leading independent school. But the opportunities that I and many of my generation enjoyed no longer existed for young people in 1997.

We've made a good deal of progress since then in putting the issue of access to our leading universities more firmly on the political agenda, and raising awareness about social mobility more generally.

There have undoubtedly been improvements in state education too. Standards of teaching and school leadership are better. There have been significant improvements in London schools, particularly for pupils from some ethnic communities. That work needs to continue apace.

Equally, it is vital that we open up admissions to our highest-performing comprehensives and ensure that grammar schools do more to reach out to bright pupils of all backgrounds.

But no matter how much we improve state schools or tackle unfair admissions, we cannot ignore the barriers that remain between state and independent schools. It is true that many more independent schools today are engaged in partnerships with local state schools on the curriculum, university access, sports and other activities. The Sutton Trust helped to get those partnerships underway and continues to support them. Other independent schools sponsor academies and free schools.

These are all welcome developments. Yet they barely scratch the surface of what is needed if some of our highest attaining schools are to offer ladders of opportunity to all based on their ability rather than remaining bastions of privilege for the few who can afford their fees.

Our independent schools are rated by the OECD as the best in the world. But no other developed country has a gap in performance between independent and state schools as large as ours.

We need to transform the independent sector, ensuring that successful day schools recruit once again on merit rather than money, and are opened up to a wider pool of talent. Forty years ago, most of the best independent day schools in this country were open to children of all backgrounds. Today, unless your parents can find £12,500 a year after tax, access is by and large denied.

And the stark truth is that an independent day school student is 55 times more likely to win an Oxbridge place and 22 times more likely to go to a top-ranked university than a state school student from a poor household. This is a shocking waste of potential.

It was because of my frustration with the status quo that between 2000 and 2007, I co-funded with the Girls' Day School Trust, a pilot scheme at The Belvedere, an independent girls' day school in Liverpool, replacing fees with admission based solely on merit. The pilot was a huge success: the intake reflected the full diversity of the area, exam results were their highest ever, and the school was a happy place to teach and learn.

Around 90 leading independent day schools would back the extension of such a state-funded Open Access scheme today, which would benefit more than 30,000 able students, whose parents cannot afford full fees.

That is the subject of this timely new independent analysis by the Social Market Foundation. The SMF have looked at the data that shows the wage premium and other gains that come from having a good independent education and road-tested our proposals for a national Open Access scheme.

They rightly recognise that such a scheme would require a strong quality threshold, and they make recommendations on key considerations around cost and recruitment if the principles of Belvedere are to be applied on a national scale.

What is incontrovertible is that Open Access would transform social mobility for highly able young people from low and middle income backgrounds, giving them greater opportunities to progress to our best universities and professions.

I recognise that there are two main political objections to Open Access. It would require selective admissions, which the main parties oppose. However, the Coalition and Labour both agree that we should not abolish the remaining state grammar schools, even though just 3% of places are provided to pupils on free school meals. Indeed, the number of grammar school places is expanding. Open Access would simply democratise existing selection in the independent sector so that all bright students could benefit, not just those with the wealthiest parents.

The second objection is that all the places are not free. Of course, if the state wished to pay the full fees for all pupils, I wouldn't object. But in these straitened times, I think that is unlikely. So it makes sense to have a mix of funding that is based on ability to pay.

We already have supporters in all politicial parties, including backbench members of both the Conservatives and Labour. But we need that backbench backing translated into frontbench policy. So I hope that the parties put Open Access in their manifestos for the 2015 election.

I am very grateful to Nigel Keohane and Nida Broughton and their colleagues at the SMF for their work on this important report.

SIR PETER LAMPL
Chairman, The Sutton Trust

# SUMMARY

This report examines the premium (the financial and other benefits) associated with pupils attending independent schools compared with those who attend state schools. It then seeks to understand the various factors that may contribute to attendance at independent school being associated with different educational outcomes and different outcomes in the labour market. Part II of the report describes an independent evaluation of the Sutton Trust's 'Open Access scheme' – a proposal to improve access into independent schools for those from more disadvantaged backgrounds.

The research draws on a range of newly available data sources in its analysis, including the latest waves of the 1970 British Cohort Study and of the Millennium Cohort Study.

## THE INDEPENDENT SCHOOL PREMIUM

Part I of the report sets out the bare facts: that the vast majority who attend independent schools come from wealthy backgrounds; that those attending independent school tend to earn more than their state-educated peers; and that they dominate the top professions.

The research shows that during a person's early career – between the ages of 26 and 42 – someone attending independent school will earn on average £193,700 more than someone attending a state school. Compared to someone who attended state school, a person who went to independent school on average earns 43% more per hour at age 34, 35% more at age 38 and 34% more at age 42.

These huge differences arise in part because these children come from privileged backgrounds anyway. But that's not the whole story. Even once parental background and test scores (educational achievement) at age 10 are controlled for, there is still a substantial earnings premium associated with attending an independent school. Between the ages of 26 and 42, a conservative estimate is that someone attending independent school will

earn a total of £57,653 more than someone attending state school (once controlling for family background and age 10 scores).

Although a range of factors may play a part in determining these results (such as the motivation of parents who choose to send their child to independent school), a major contributory factor appears to be better educational achievement. Those who go to independent schools are more likely to get good A-levels, more likely to get degrees and to get them from the most selective universities. Not only are their educational outcomes better, but, on the best available evidence – value-added scores – independent schools (on average) progress their children more during their school years than state schools.

## WIDENING ACCESS TO INDEPENDENT SCHOOLS

On this evidence, limiting the opportunity to attend independent schools to those who are able to afford the high fees is inequitable. Part II, therefore, goes on to evaluate a prominent proposal from the Sutton Trust – the Open Access scheme– to open independent schools up to those from all backgrounds. Under this scheme, schools that participate would select all their pupils on the basis of academic ability rather than ability to pay the fees. The state would subsidise the fees (in full or in part) for those children whose parents were unable to meet the costs.

The evaluation focuses on three key aspects of the proposal:

1. **How the scheme can ensure that it boosts educational attainment for participating children.** The report shows evidence that on average independent schools outperform state schools, as measured by the available data on value-added scores (between the ages of sixteen and eighteen).[1]

   However, some state schools outperform some independent schools. Were every independent school to be admitted to the Open Access scheme, participating pupils could find themselves in an independent school whose educational performance was below that

of neighbouring state schools. This would be undesirable for the child and for the state. It would make sense therefore to ensure that poorly performing independent schools are not allowed to participate in the scheme. Any independent school that performs below the average (on value-added scores) of state schools in their local authority area could be excluded.

2. **Greater access for disadvantaged pupils to independent schools.** Currently, children that come from households with higher incomes are far more likely to attend independent schools than those from lower income households. A third of those with places come from households in the top 10% of the income distribution. Those in the top fifth of household incomes account for 50% of those with places at independent schools. In contrast, those in the bottom 30% of household incomes account for just 8% of places at independent schools.

   By selecting on merit rather than ability to pay, the Open Access scheme aims to widen access for those from low and middle income backgrounds. Our analysis indicates that selecting by merit would significantly alter the social composition of independent schools. Overall, places would be much more evenly distributed across households at different levels of income, making independent schools much more economically diverse. Most notably, there would be a dramatic reduction in the proportion of children coming from the top 10% of household incomes (the proportion would roughly halve). There would also be a very significant increase in the proportion of children coming from the bottom 40% (the proportion would more than double). Notwithstanding this significant change in composition, children from better-off families would still be more likely to go to independent schools because of the strong link between achievement and family background.

   The paper puts forward a range of possible methods for further boosting the participation of children from less advantaged children in independent schools – such as using more contextual selection criteria.

3. **Costs**. Under the Open Access scheme, the government would subsidise the cost of sending children from poorer backgrounds to independent schools. As such, information on potential costs is very important.

   The central estimate in our analysis is that the scheme would cost £215m per annum based on the latest figures on independent school fees and a set of other central assumptions. However, we provide upper (£335m) and lower (£24m) estimates. The significant difference reflects the number of variables and the fact that such a policy has not been attempted before at scale.

# PART I – THE INDEPENDENT SCHOOL PREMIUM

Part I of our report firstly sets out the divide in employment and educational achievement between alumni from state and independent schools. It then goes on to investigate the reasons for this divide – specifically looking at how much of the divide can be explained by the family background and prior ability of those going to independent schools. It finally shows how a significant part of the divide relates to the better educational performance of independent schools.

## BASTIONS OF PRIVILEGE

Independent schools in the UK are bastions of privilege, where a small proportion of predominantly affluent families pay high fees for an education that is associated with higher attainment, good social networks, and lucrative long-term employment outcomes for those attending. Extensive evidence indicates that the education and employment outcomes of those attending independent schools are, on average, much higher than those attending comprehensive state schools.

Those from independent schools have been better able to take advantage of the expansion in managerial and professional roles, as highlighted in the Milburn State of the Nation report.[2] Despite the fact that only 7% of pupils attend independent schools, Sutton Trust research has shown that their alumni dominate the top professions. They include over a third of MPs, nearly one quarter of university vice-chancellors, over half of senior medical consultants, FTSE chief executives and top journalists, and over two-thirds of High Court judges.[3] The past few decades have seen relatively little progress: in the late 1980s, 58% of top jobs were held by former independent school pupils, compared to an only slightly lower figure of 53% by the end of the 2000s.[4]

More broadly, amongst degree holders, those who have been to independent schools are more likely to graduate with first or second class degrees, and are more likely to move into a graduate level role.[5]

Unsurprisingly, previous evidence indicates that those educated privately earn significantly more by the time they are in their thirties.[6]

The gap between the educational attainment of children attending independent schools and those attending state schools in the UK is among the highest across OECD countries.[7] From GCSE results to university attainment, pupils at independent schools get better results.

Over 70% of independent school pupils achieve 5 A*-C grades including English and Maths at GCSE, compared to around 60% of state school pupils. The difference is even starker for the top grades. Around 40% of GSCE exam entries from independent schools are grades A or A*, compared to just 20% of state school entries.[8] At A-level, the achievement gap continues, with 30% of independent school students achieving the grades most commonly needed for entry to Russell Group universities,[9] compared to around 9% in state schools.[10]

Unsurprisingly, the superior performance of pupils at independent schools means that over three quarters of their pupils go on to Higher Education compared to 69% of pupils from comprehensive schools. Furthermore, independent school pupils are much more likely to go to the most selective universities: 48% of independent school pupils attend one of the 30 most selective universities, over double the national average.[11] Even if they have the same A-level grades as their state school counterparts, independent school pupils are still 9% more likely to be offered a place at university, according to a Guardian investigation.[12]

Most people think that independent schools have higher educational standards than state schools: 68% believe independent schools offer high academic quality.[13] This means that these independent schools are highly sought after: 57% of parents agree that they would send their child to an independent school if they could afford it. In fact, a much higher proportion of those from Black, Minority or Ethnic (BME) backgrounds say they would want their child to attend an independent school if they could afford it. Britain's independent schools now serve a wider international market too: in 1989, there were an estimated 11,700 foreign pupils in UK independent schools, whereas in 2010 there were an estimated 23,300.[14]

Nonetheless, only a small proportion of all children go to independent schools – about 7.2% of all pupils, which has fluctuated only slightly over the years since 1964 when 8% of pupils attended independent schools.[15] Crucially, although independent schools do offer bursaries and scholarships,[16] the high fees mean they are overwhelmingly the preserve of children from wealthy backgrounds. Analyses of the Family Expenditure Survey and the British Household Panel Survey demonstrate that those with the highest incomes are much more likely to attend independent school. [17] Recent polling shows that just over 12% of parents in social class A have their oldest school child attending independent school, compared to about 1% in social grades C2 and D.[18]

This is unsurprising. Average annual fees for the independent sector (those that form the Independent Schools Council) stand at £12,582 for day pupils and £28,500 for boarders.[19] Average fees for day schools rose by 83% in real terms between 1992 and 2008, far in excess of real terms growth in median disposable income over the same period (18%). In fact, the expense of an independent primary school over seven years is still much higher – nearly three times so - than the average additional cost of buying a house and getting a mortgage over seven years in the catchment area of a top state primary school. [20]

These 2,500 independent schools in the UK are dominated by children from wealthy backgrounds. This is not the case in some other countries. In Australia, for example, a larger section of the population has access to independent schools, which are part subsidised by Government. Schools with low fees are the fastest growth area in the Australian independent schooling sector, and cater to all income groups, meaning they are not as socially exclusive.[21]

## WHAT FACTORS CAUSE BETTER OUTCOMES FOR INDEPENDENT SCHOOL PUPILS?

The figures set out in the section above are ample evidence of the success of independent schools in getting their pupils into the top universities and jobs. But, what is the cause of this success? Is it something which these

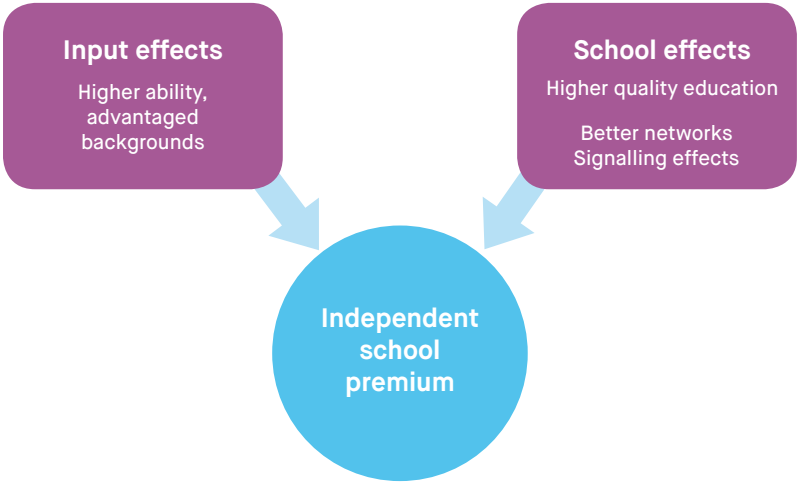
schools are doing and state schools are not? Or, do independent schools recruit more able pupils in the first place or those with backgrounds that help them succeed both academically and in the workplace?

The factors that influence the gap in subsequent achievement between those that go to state schools and those that go to independent schools can be grouped into two broad categories:

1. **Input factors.** The types of students who enter independent schools, namely those with higher prior ability and parents who are more educated and with higher incomes.
2. **School factors.** The quality of the educational experience at the school; better networks and signalling effects.

It is important to distinguish between the two to understand whether it is indeed the case that independent schools actually boost achievement in education and later life.

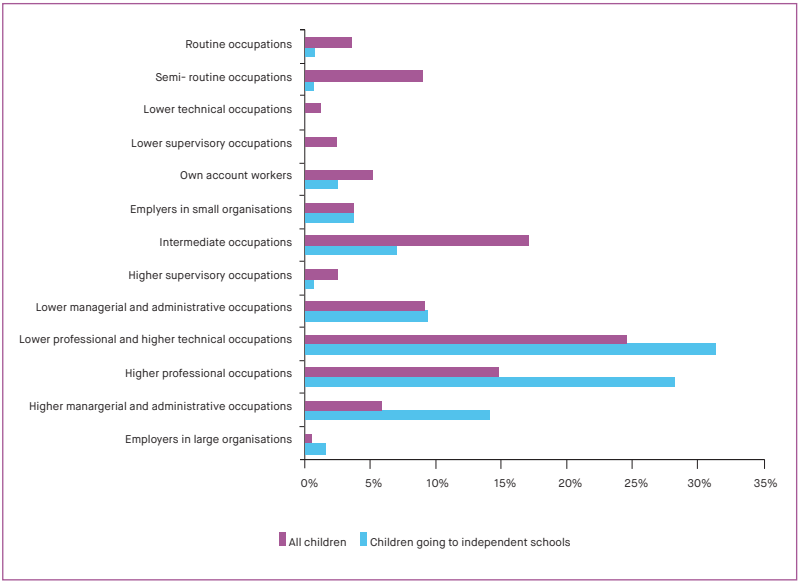
## INPUT FACTORS



Independent schools may simply be attracting students who are initially more competent academically and therefore achieve more when they leave school. Attainment is strongly correlated with socio-economic background, with those from the wealthiest backgrounds generally having higher levels of achievement than children from lower income backgrounds even at 3 years of age.[22] More advantaged parents are more likely to undertake the types of activities with their children that lead to higher achievement, such as reading with their child, for example.[23]

Since independent schools are disproportionately populated by those from the wealthiest backgrounds, this could be the explanation for the better outcomes associated with attendance, rather than anything added by the school.

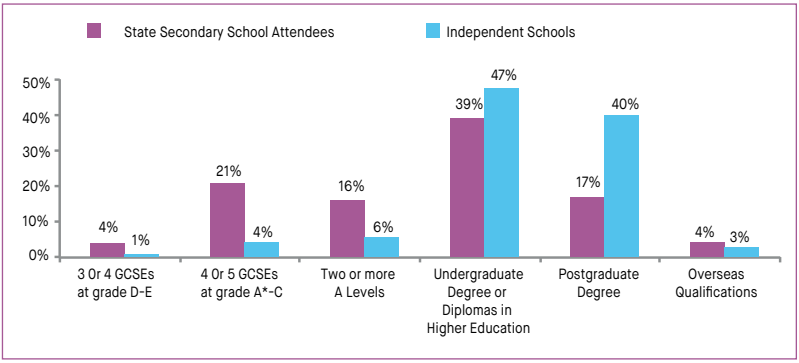
Figure 1: Distribution of pupils by socio-economic background




*Source: SMF analysis of MCS, age 11, based on response to question on school planning to attend at secondary level*

As shown in Figure 1, independent school students tend to come from more privileged socio-economic backgrounds. They also tend to have better educated parents.

Figure 2: Distribution of highest parental qualifications across all pupils at secondary school




*Source: SMF analysis of MCS, age 11, based on response to question on school planning to attend at secondary level*

In addition, the decision to send a child to a high-performing and expensive school may denote strong parental motivation for the child to succeed academically. Since active parental involvement in children's education is strongly associated with better outcomes, it may be the case that the type of parent that sends their children to independent school may also be the type of parent who provides a strong environment for learning and development.[24] The fact that parents pay fees may also incentivise more engagement with the school, though there are of course many motivated parents sending children to state schools.

There is debate in the academic literature about whether pupil characteristics matter more for educational attainment than the educational experience at school. In the US, the controversial Coleman Report in 1966 found that, once family background and school composition effects had been taken into account, measured school quality had little effect on pupil achievement. Nonetheless, more recent evidence does

suggest that school quality can have an impact on both attainment and earnings, even after controlling for prior attainment, socio-economic background and parental characteristics.[25]

## SCHOOL FACTORS

### 1. Higher quality education

### 1.1 Funding per pupil

There is evidence that schools with higher levels of funding tend to perform better.[26] But by no means is this is a definitive conclusion. Other studies have found that, across comparable countries, there is no correlation between the educational results of young people and spending per pupil.[27] However, within countries, extra spending per pupil does imply greater resource for inputs – many of which are described below – such as hiring and rewarding better quality staff, enabling children to be taught in smaller classes, and providing better facilities.

Independent schools have long spent more per pupil than state schools. In 2011-12, for instance, average expenditure per state pupil was £5,502; for secondary academies, it was £6,058.[28] In contrast, average school fees for day independent schools were £12,153 in 2012.[29] In fact, independent schools may spend more per pupil than the average fee; this is because such schools often receive significant funds from investments and property.[30] Moreover, expenditure on capital funding – for equipment and maintenance - is much higher in independent than state schools. Previous SMF research has indicated that capital spend per pupil in state schools is roughly a third of what it is in independent schools.[31]

### 1.2 Teacher quality

As Sir Michael Barber has commented, "the quality of an education system cannot exceed the quality of its teachers". A McKinsey report in 2007 demonstrated that the countries that do best in internationally comparable assessments – for instance, TIMSS – do so because of the quality of the teaching profession. In fact, teaching quality was shown to be much more important than the level of funding a school received or classroom sizes.[32]

Teaching quality is cultivated in three distinct ways. First, by getting the right people to become teachers. Second, as set out in the McKinsey report, by developing teachers into effective instructors through "coaching classroom practice, moving teacher training to the classroom, developing stronger school leaders and enabling teachers to learn from each other". Finally, by implementing systems to ensure every child is able to benefit from excellent teaching.

The importance of teaching is demonstrated through numerous robust research studies. For example, one study of GCSE attainment found that being taught by a "high quality" teacher compared to a "low quality teacher" increased performance by almost half a GCSE grade per subject per pupil.[33] In addition, there is a significant salary premium from being exposed to better quality teachers at school.[34]

The evidence available suggests that independent schools are generally able to attract and retain better qualified staff. This is likely due, at least in part, to the freedom, flexibility and additional funding they have.[35]

Although it is not the only indicator, educational qualifications are strongly associated with high-quality teaching. The qualifications of a typical independent school teacher tend to be higher than counterparts in the state sector: 54% of teachers in the independent sector have a degree which is 2:1 or higher, compared to 45% in the state sector. Similarly, the latest Labour Force Survey demonstrates that 7% of teachers in the independent sector have a doctorate compared to 2.25% in the state sector. [36]

Moreover, teachers in the independent sector are more likely to have stronger knowledge of the subject they are teaching. For instance, 76% of physics teachers in independent schools have a physics degree compared to 50% of physics teachers in state schools. Similarly, 70% of maths teachers in independent schools have a maths degree, compared to fewer than 50% of teachers in the state sector. Such a gap also exists for modern languages, chemistry and biology.[37]

## 1.3 Class sizes

The evidence is hotly debated about the impact of class sizes on educational performance. Most academics have found there is scant evidence that, once prior ability, type of school attended and teaching quality are controlled for, class sizes in primary and secondary schools affect educational attainment, except in the very earliest years. A comprehensive literature review in 2007 found that of 112 studies which look at the impact of the reduction in class sizes on student outcomes, only 9 have found any positive relationship. The remaining 103 found either no significant relationship, or a negative relationship. The OECD has concluded: "variations in teacher quality completely dominate any effect of reduced class size".[38] However, in 2003, Alan Krueger found a modest positive effect of smaller class sizes.[39] Moreover, there is some evidence to suggest class sizes have an impact on wages later in life, especially for women.

What is clear is that the pupil-teacher ratio is lower in independent schools compared to state schools, meaning those who are privately educated have smaller class sizes. Pupil-teacher ratios have been falling overall in both the independent and state sectors for nearly four decades. In 2012, the pupil-teacher ratio was 16:1 in state secondary schools compared to 10:1 in independent schools.[40]

## 1.4 Subject choices

Recent work suggests that the employment premium from selective education may be partially explained by the subjects studied rather than the structure of the school. Those in selective schools – including independent schools – are more likely to study core subjects, such as languages, English, mathematics and science, which the evidence suggests are more likely to help entry into Russell Group universities and are more important for long-term occupational opportunities.[41]

## 1.5 Development of non-cognitive skills

Analysis of the two major cohort studies shows that non-cognitive skills – namely, confidence, communication and resilience – became 33 more times important in determining employment outcomes between cohorts born in 1958 and 1970.[42] A leading explanation for this is that jobs moved away from manufacturing to services, which require stronger non-cognitive skills. Other work has shown that social and communications skills, as well as physical and psychological characteristics, are becoming as important as formal educational attainment in determining later success.[43]

There is a perception among the public that independent schools are good at instilling strong non-cognitive skills in their pupils. For example, 66% believe independent schools "instil a sense of confidence in pupils". Equally, 49% agree that "they excel in developing soft skills such as communication and teamwork, which are important to employers". A clear majority of those on the Assisted Places scheme agreed that their school developed skills of self-reliance, self-discipline and ambition.[44]

It is not just in the classroom that these skills are cultivated; it has been commented that independent schools also provide more extracurricular activities, such as sport, music and community service.

## 1.6 Greater autonomy

There is strong evidence from the OECD that schools that enjoy greater autonomy tend to produce better results, as long as it is accompanied with robust accountability.[45] Independent schools enjoy greater freedoms over pay, curriculum and testing, which may help to explain their better results. Despite attempts by successive governments to allow state school leaders greater autonomy, independent schools still retain greater discretion over how they manage and lead their organisations than their state counterparts.

### 2. Signalling and network effects

The factors described above can all contribute to a higher quality of education. In addition to these pure educational causes, there are other potential drivers that can contribute to the success of independent school pupils (other than the quality of the student intake which is described in the section below). The first is the networks that they cultivate for pupils – both from their peers, and parents, alumni and others associated with the school. Children from better-off families tend to have more diverse social networks than those from poorer families; much work has shown the importance of networks for securing and flourishing in work.[46] As Sir Anthony Seldon has noted: "All schools can develop and maintain widely-drawn address books and contacts of the school's alumni to help leavers to acquire internships and jobs".[47]

The second possible explanation is a signalling effect: employers may be more likely to recruit and pay higher salaries to those from independent schools because they believe they are more competent. There is little evidence to support this claim; it remains a hypothesis.

So, there are a wide range of reasons why independent schools may add more value than state schools. From a policy perspective of trying to improve educational attainment, it is important to understand not only whether independent schools add value, but also how they do it. In the rest of Part I, we use data from the British Cohort Study and the Department for Education to disaggregate the influence of family background from the influence of independent schools on employment outcomes; and beyond this, we also seek to analyse the extent to which better employment outcomes among independent school alumni can be explained by higher levels of educational achievement.

## MEASURING THE REAL EFFECT OF INDEPENDENT SCHOOLS

In this section, we present our findings on the size of the independent school effect and its drivers, based on analysis of data from the British Cohort Study (BCS).

The BCS is a representative sample of the UK population, following all individuals born in a specific week in 1970 over time. We use data collected for age 0, 5, 10, 16, 21, 26, 29, 34, 38 and 42 on family background, place of residence, early childhood characteristics and test scores, academic achievement and wages to estimate the relationship between independent school attendance and outcomes in later life, specifically focusing on wages from employment.[48]

As pointed out by Green et al., having such a rich data set allows us to account for various characteristics of the individuals that may affect labour market outcomes as well as the likelihood of attending an independent school. For instance (as discussed above), it might be the case that children of higher ability are more likely to attend independent schools, and that higher wages later on in life simply reflect their higher innate ability. Family characteristics are equally important, since better educated and connected parents may provide an advantage to their children, irrespective of whether or not they attend independent school. If such well-connected parents are more likely to send their children to independent school, which is likely to be the case, then an estimate of the independent school premium without controlling for factors affecting the selection into independent schooling will overestimate their effect on later outcomes.

## The absolute difference in wages between former state school and former independent school pupils

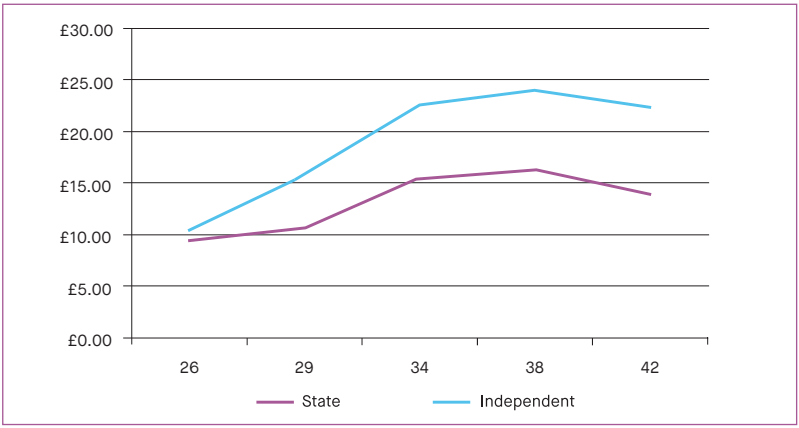
Figure 3 shows the evolution of the wage differential between independent and state school graduates for the BCS cohort at different ages, before controlling for any other factors. The differential in gross wages at age 42 was about £8.50 per hour for the whole sample, with a lower absolute difference for women at about £7.40. Overall, the absolute wage difference between independent and state-educated individuals increases as they get older, and this is true for both men and women.

It reveals a relatively stable wage differential between independent and state school students during their thirties and a slightly higher wage

differential at age 42. It is interesting to note that the raw wage gap seems to have widened during the recession, and that while real wages of non-independent degree holders seem to have fallen since 2008 (when our cohort was aged 38), they have remained relatively stable for individuals who have been to independent school.

This could have several explanations. Individuals with an independent school education may have been more resilient to wage cuts or redundancy during the recession because they were more likely to hold jobs that were less affected by such cuts. It is also possible that if made redundant, independent school pupils were better able to find a new job that would pay at least as well as the previous one (for instance through a better network).

**Figure 3: Earnings premium at different ages: independent vs state school pupils**

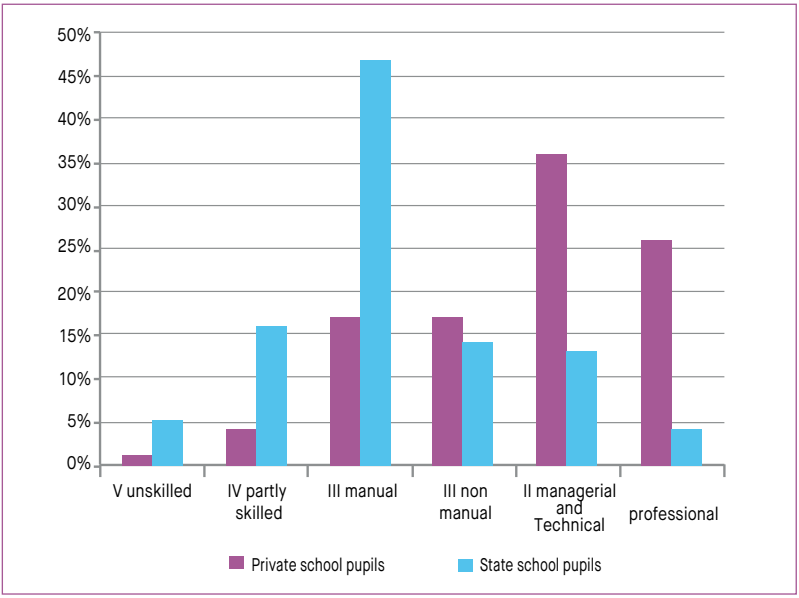



On the basis of the data set out above, it is possible to estimate the additional income that a person educated privately would have had earned in their early career between the ages of 26 and 42 beyond that of a person educated in the state sector. Assuming that the earnings premium varied gradually (as illustrated in the graph above), we estimate that the independent school premium equates to £193,703 (in 2013 prices) for a person working full-time (35 hours a week) between the ages of 26 and 42. [49]

## INPUT FACTORS

Selection into independent schooling is not unrelated to family and child characteristics. Of the cohort we analyse, independent school pupils are more likely to have parents in professional and managerial occupations, as shown in the chart below. Their parents will, on average, have spent more years in education. In addition, they tend to have higher levels of attainment by age 10, before entering secondary school. [50]

**Figure 4: Breakdown of the BCS cohort by social class**




In the following section we estimate the wage premium from independent schooling for different specifications that gradually control for family background characteristics, early age ability and finally for highest level of education, to understand the extent to which these "input factors" explain the differential in earnings outcomes between former state school and former independent school pupils. In turn, this will provide an indication of the extent to which the school itself influences future attainment. More detail on the methodology is provided in the Annex.

## THE INDEPENDENT SCHOOL WAGE PREMIUM[51]

As shown in figure 3 above, there is a substantial difference in earnings between state and independent school alumni. When family background is accounted for, the age 26 wage premium becomes insignificant, but the wage premium at ages 29 to 42 remains high and significant at between 16% (age 38) and 25% (age 29). The inclusion of family background characteristics thus reduces the estimated link between wages and independent schooling by between one third and one half compared to the raw estimate, confirming the intuition that the same factors that determine whether or not a child attends independent school also impact upon later labour market outcomes.

In addition, those who go to independent schools tend already to be performing well by age 10. Accounting for this slightly reduces the wage premium, indicating that part of the gap in wages is explained by the fact that those who go to independent schools are already performing well at a young age. However, the premium is still positive and significant, ranging between 13% and 22% between the ages of 29 to 38, as shown in the table below. The premium is 14% at age 42 although no longer statistically significant (this is likely to be at least partly explained by the smaller sample size at age 42 compared to age 38 – see the Annex for further details).[52]

So, even once family background and early age test scores are taken into account, those who go to independent schools are more likely to achieve higher salaries in later life, indicating a strong "school effect".

**Table 1: Salary premium after controlling for family background and test scores**

| AGE | SALARY PREMIUM |
|---|---|
| 26 | 5% |
| 29 | **22%** |
| 34 | **20%** |
| 38 | **13%** |
| 42 | 14% |

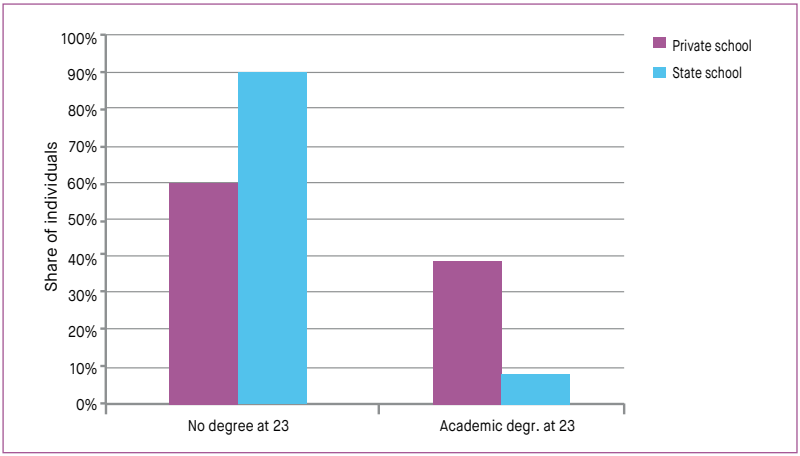
*Statistically significant results are in bold*

## HOW DOES THE SCHOOL EFFECT OPERATE?

As set out earlier in this chapter, there are a number of ways in which the "school effect" could operate, one of which is that independent schools may be better able to produce higher levels of educational achievement. To try to measure this effect, we looked at the gap in wages between independent and state school alumni when we included an additional control for whether or not the individual has an academic degree, on top of accounting for family background and prior attainment at age 10. This reduces the premium from those in the table above, but they are still relatively sizeable at about 15% at age 29 and 7% and 9% at age 38 and 42, respectively. However, they are only statistically significant at age 34.

The fact that the independent school advantage becomes insignificant once we control for degree acquisition suggests that the independent school advantage at most stages of the career lifecycle may work through the fact that independent schools are much better at progressing their students onto higher education. A look at the average level of attainment by type of secondary school in Figure 5 shows how dramatic the difference in participation rates in higher education is for independent versus state school pupils in the cohort born in 1970. While about 38% of individuals who had attended independent secondary school held a degree by the age of 23, this percentage was only 8% for state educated pupils. It should be noted that these figures refer to a cohort of individuals born in 1970. Participation in higher education has changed substantially since then.

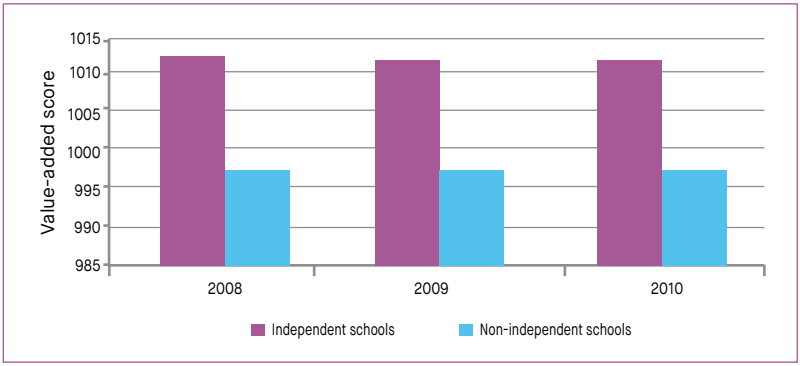
Figure 5: Degree acquisition by age 23 by type of school attended




However, the results also indicate that there is an independent school premium above and beyond the fact that it increases the likelihood of acquiring a university degree, at least at age 34. Independent school pupils with a degree earned on average about 20% more than their degree holding state school educated counterparts by age 42.[53] So having been to an independent school does increase later-life earnings above and beyond the fact that it increases the likelihood of achieving a degree.

This could be due to better networks that allow independent school pupils to access better entry positions after degree completion, with comparable students from state schools gaining ground at later stages of the career. It may also be the case that independent schools produce better school outcomes, thus allowing them to place their students in better universities, allowing them to acquire better degrees that may be valued higher in the labour market. Recent data by the Higher Education Statistics Agency (HESA) show that this is indeed the case: while only about 18% of comprehensive school pupils move on to selective higher education, this figure is 48% for individuals from independent schools.54 Access to better universities may also be helped by the larger emphasis placed on career planning and advice in independent school and the better guidance provided to students for the applications processes.

Figure 6: Share of individuals progressing to higher education and selective higher education by school type




*Source: Higher Education Destination Tables, HESA, 2011.*
*Notes: Data covers the years 2007 to 2009.*

## EDUCATIONAL ATTAINMENT: ANALYSIS OF VALUE-ADDED SCORES

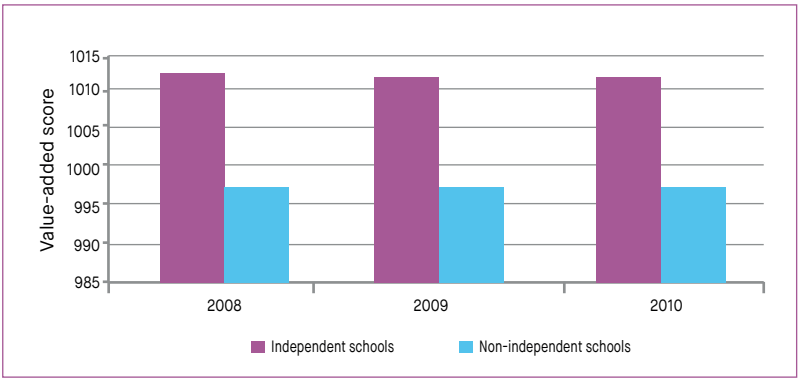
The analysis above illustrates that attending an independent school leads to a significant earnings premium even when controlling for parental background and early test scores. However, as noted in 1.2 above, this premium may derive both from a better education and / or from other factors that affect the chances of an individual being selected to a top university or employed on a good wage. Higher educational quality may be considered worthy of state investment; other factors like improved networking and signalling, less so. There is therefore a need to look directly at the educational value that independent schools provide versus state schools.

One way of measuring the difference in educational attainment across independent and state schools is by looking at value-added scores. Value-added scores take into account prior attainment. This means they measure the progress a school's pupils make compared to the progress they would be expected to make based on how well they had been doing at school so far.

Ideally, as we are looking across secondary school at a whole, it would be best to analyse value-added data on progress made from age 11 to age 18. However, unlike state schools, independent schools do not routinely publish this data. Instead, we have to rely on data published by the Department for Education during a limited time period (2008-2010), on value-added scores across state and independent schools between GCSE and A-level. The measure adjusts for different course types offered at different schools, with independent schools including both day and boarding schools.

The graph below shows that independent schools scored consistently higher than state schools during the period in which the data was available. A score of 1,000 represents the average: in a school with a score of 1,000, pupils will, on average, be making the expected level of progress given their GCSE attainment. A score of more than 1,000 indicates better than expected observable progress, and a score of less than 1,000 indicates worse than expected progress. Whilst this data only covers progress between GCSE and A-level, we make the assumption that they are likely to be indicative of value-add throughout secondary school.

**Figure 7: Average value-added scores 2008 – 2010: independent vs non-independent schools**

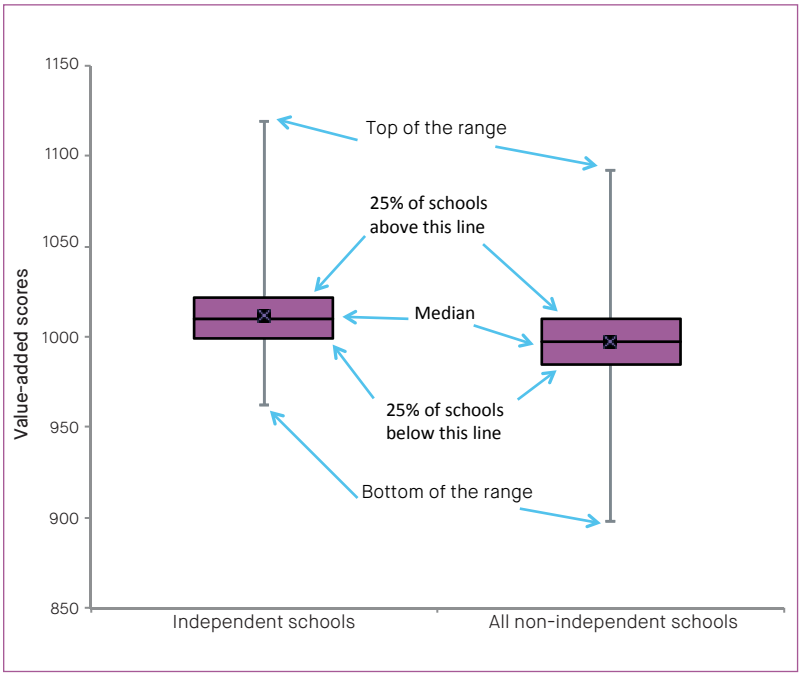



*Source: SMF analysis of DfE value-added scores*

What's more, this is not simply a case of a few top independent schools skewing the data. As the box plots below show, around three quarters of independent schools achieve scores higher than 1,000, compared to around half of state schools.

The value-added measure does not adjust for differing socio-economic background of pupils across different schools, as this data was not available. This means that the value-added scores may over-estimate the positive effect of independent schools. However, it is likely that much of the benefit of a more advantaged background will already be reflected in GCSE scores, which the measure does control for.

Figure 8: Average value-added scores 2008 – 2010: independent vs non-independent schools




*Source: SMF analysis of DfE value-added scores*

And set against this potential for over-estimation, value-added scores could also under-estimate the total benefit gained from attending an independent school due to the "upper bound" problem. For pupils that are already performing well at GCSE – as we know that many independent school pupils do – there is a more limited amount of progress that can be made in terms of grades at A-level, since there is little "catch up" activity that the school can help with. But the skills and education that a school provides may show up in higher attainment at university or in benefits in the jobs market. So overall, the evidence is suggestive that - on average – independent schools are better at adding value to pupils' results. However, it would be helpful to have richer data on the value-add at ages when children are younger.

This chapter has shown that an independent school premium does exist. Some of this is due to the quality of the student intake, but our analysis has shown that a meaningful proportion is likely due to the learning environment provided by the schools. The existence of an independent school premium locks out a wider pool of children from institutions that lead to participation in elite universities and employment. The next chapter seeks a way to correct these problems to ensure that independent schools are open to a wider group of young people.

### Value-added data from DfE

"Value-added" scores demonstrate the average progress that students in a given school make between different key stages. They are a better measure than raw exam results of a school's performance as they take into account prior attainment - how well the student was already performing.

The Department for Education publishes value-added scores for schools in the state sector, allowing parents to make comparisons across schools using this measure. Previously, the Department also published contextual value-added scores, which took into account the differing profile of socio-economic backgrounds across different schools; however this measure is no longer available.

Independent schools are not required to publish value-added scores. However, between 2008 and 2010, the Department for Education asked independent schools voluntarily to provide value-added data at Key Stage 5. This value-added data shows the average progress made from GCSE to A-level. This is the data we use to look at value-added across independent schools. Although not all independent schools are included, the sample size is relatively large, with data from over 2,500 schools, of which over 450 are independent in 2010.

The data does have some limitations including the fact that independent schools' participation was voluntary. Firstly, only Key Stage 5 data is available, rather than data covering the progress made throughout secondary school. However, it is likely that the factors that affect school performance at Key Stage 5 level – such as teacher quality and availability of resources – will be similar across other year groups. Secondly, the value-added scores, whilst adjusting for differing types of courses in different schools, do not adjust for contextual factors such as socio-economic background. However, it might be expected that these effects would be less important by Key Stage 5, and many will be captured by controlling for prior attainment at GCSE level.

Sources: Department for Education, Guide to Key Stage 4 to 5 value-added measure, 2010 model

# PART II: AN INDEPENDENT ANALYSIS OF THE OPEN ACCESS SCHEME

Part I demonstrated the significant returns that arise from independent schooling. It also showed that opportunities to access the benefits of independent schooling are determined in large part by parental wealth.

This section of the report describes and assesses one proposed method of overcoming the inequities that currently emerge from independent schooling: the Sutton Trust's Open Access scheme which seeks to broaden access to independent schools.

## 1. PREVIOUS ATTEMPTS TO WIDEN PARTICIPATION IN INDEPENDENT SCHOOLS

When confronted with the inequitable distribution of independent schooling, policymakers have responded either by advocating abolition or widening access. In 1973, Roy Hattersley, the then Shadow Education Secretary, exclaimed: "I must, above all else, leave you with no doubts about our intention initially to reduce and eventually to abolish private education in this country".[55] In 1978, the Labour Party reiterated its objective to abolish fee-paying schools but did not enact it and, after the 1980s, ceased pursuing the elimination of independent schools.

In contrast, many governments have sought to widen access to independent schools. Prior to R.A. Butler's Education Act (1944), before all schooling was free, independent schools could receive subsidies from central government to pay for those from modest backgrounds to attend. These self-governing and selective schools were known as Direct Grant schools. They were permitted to charge fees for up to half of their intake. The 1944 Education Act stipulated that half of the places at these schools must go to the most able children from state primary schools. Under this regime, roughly 70% of England's top independent schools were principally state-funded and 61% of pupils paid no fees at all.[56] In 1976, these Direct Grant schools ended.

Other attempts at integration have been attempted. The Fleming Report in 1944 recommended one-quarter of places at independent boarding schools should be assigned to children from state-financed primary schools through a bursary scheme paid for by government. But the scheme was administered locally and admission criteria for the publicly-funded places were not set centrally, but by schools themselves. In 1964, the Labour Party established the Public Schools Commission which recommended that a minimum of half their places within seven years be open to pupils from state schools with a social or academic need for boarding. This suggestion, however, was not pursued.

Finally, the Assisted Places Scheme was introduced by the Conservative Government in 1980, and during its lifetime provided means-tested support direct from central government for 75,000 young people – with 40% from working-class backgrounds - to attend independent schools. It was ended by the Labour Party in 1998, with criticisms focusing on its "openness to middle class children elbowing out those from disadvantaged backgrounds".[57] However, evaluations have shown that the scheme boosted social mobility by improving the chances of those disadvantaged children who took part.[58]

It is almost a hundred years, then, since the first efforts to spread more widely the advantages of independent schooling. Yet, as Part I showed, the premium that derives from independent schooling flows almost entirely to the offspring of the wealthy.

While some continue to argue for the abolition of independent schools, such an ambition from a social market perspective appears misplaced for a number of reasons. First, independent schools can be considered a thriving part of the social economy; civic institutions that contribute to the objective of better educational outcomes. Second, the excellence of many independent schools is undisputed. Last century Anthony Crosland noted pithily, independent schools are either "so bloody they ought to be abolished or so marvellous they ought to be made available to everyone".[59] Abolishing independent schools because they are 'so marvellous' appears

to be a perverse response. In fact, as with UK universities, the independent sector is held in high regard internationally, providing good prospects as an export industry and as a means of building networks internationally. Third, both Labour and Conservative governments have sought to develop greater diversity in schooling, by which the boundary between the state and the independent sector has become more blurred with the emergence of academies and free schools.

Below we explore in depth a proposal to increase the opportunities for those from more disadvantaged backgrounds to attend independent schools. The scheme is the Open Access scheme put forward – and tested – by the Sutton Trust.

## 2. DESCRIPTION OF SUTTON TRUST'S PROPOSED OPEN ACCESS SCHEME

### Open Access

The Sutton Trust has put forward its 'Open Access scheme' as a means of tackling the inequity that emerges from the independent school premium.[60] It attempts to make the benefits of independent schooling available to a wider number of people. The details of the scheme are as follows:

- Selection criteria: Admission to an independent secondary school at the age of 11 is based on academic merit alone.
- Means-tested subsidies: Fees for successful applicants are charged on a sliding scale: those from high income backgrounds pay their fees in full; those from middle income or low income backgrounds get their fees subsidised in part and in full respectively. The amount of subsidy a school needs would be dependent on the catchment area and intake: the poorer the intake, the more subsidy that is needed.
- School participation: schools participate on a voluntary basis but are either in (and select on merit) or out (and are not eligible for subsidy). Only high performing independent schools would be eligible to participate.

## 'Open Access' in practice: the Belvedere Scheme

The Open Access scheme was piloted at the Belvedere School – an independent school for girls in Liverpool - between 2000 and 2007. The school was selected because its catchment area included children from a range of social and ethnic backgrounds. The subsidy for this trial was derived from philanthropic money provided by the Sutton Trust and the Girls' Day School Trust (GDST), which ran the school.

An independent evaluation by researchers at Buckingham University found that: [61]

- The social mix of the school became much more representative of the general population. About a third of entrants had their fees paid in full (i.e. were considered low income) and a further 38% had their fees partly covered.
- Overall, 32.8% of the total number of girls admitted in the first five years of the scheme were on Free School Meals, almost double the national average of 15.3% for girls in 11-15 state schools.
- Prior to the scheme, 10% had had their fees fully paid; this rose to 36%, then 35%, then 25% in subsequent years under the scheme.
- The academic ability and progress of the pupils at the school also improved. This showed up in the Cognitive Abilities Test as well as improved GCSE results. However, those from more socially-disadvantaged backgrounds improved their scores somewhat less than those from more privileged backgrounds.
- Nearly all those who had entered the school after the introduction of Open Access and had stayed to do their GCSEs were intending to go to university.
- Teachers referred to a general improvement in ability since the adoption of the scheme.

- Due to the rising number of fully and part subsidised children, the scheme became more expensive as subsequent Open Access cohorts were recruited, costing £2 million annually in maturity.

## Introduction to policy considerations

The rest of this chapter sets out the major policy considerations that should be confronted if the Open Access scheme were to be rolled out across a wider number of schools. The assessment draws on existing evidence of the effect of policies to widen access to independent schools together with new data and policy analysis.

The Sutton Trust's proposal is that the scheme be enlarged and applied to 100 top-performing independent day schools that would voluntarily opt into the scheme. Based on the Belvedere pilot, the Sutton Trust argues that approximately 50% of the fees would have to be subsidised by government. A third of pupils would be fully subsidised, a third would be part subsidised, and the remaining third would be full fee-payers. Nearly ninety independent schools in the UK have already registered interest in participating in the scheme.

Three particular policy considerations stand out:

1. **Improved educational attainment for those from modest backgrounds.** The evidence shows that there is on average a premium to educational attainment from attending independent schools. However, as will be seen, this is not the case for all independent schools, and encouraging children from disadvantaged backgrounds to attend an independent school that performs worse than a local state school would be counterproductive. Consideration therefore needs to be given to which schools are allowed to participate in the scheme and whether regulatory reforms are needed.

2. **Greater access for disadvantaged pupils to independent schools.** By selecting by merit rather than ability to pay, the scheme aims to widen access for those from more disadvantaged backgrounds. We present analysis on whether this admissions policy is likely to widen access especially with regard to those from lower-income backgrounds and the range of options for further promoting wider access.
3. **Costs.** In the Belvedere pilot, charities paid the subsidy for those parents who could not afford the fees. Under a wider scheme, the government would pay the subsidy. Issues of cost will be a central consideration.

## 2.1 IMPROVED EDUCATIONAL ATTAINMENT

### Variation in educational performance across independent schools

The purpose of the Open Access scheme is to provide those from poorer backgrounds with the chance to attend an excellent school that, because of cost, is currently denied them.

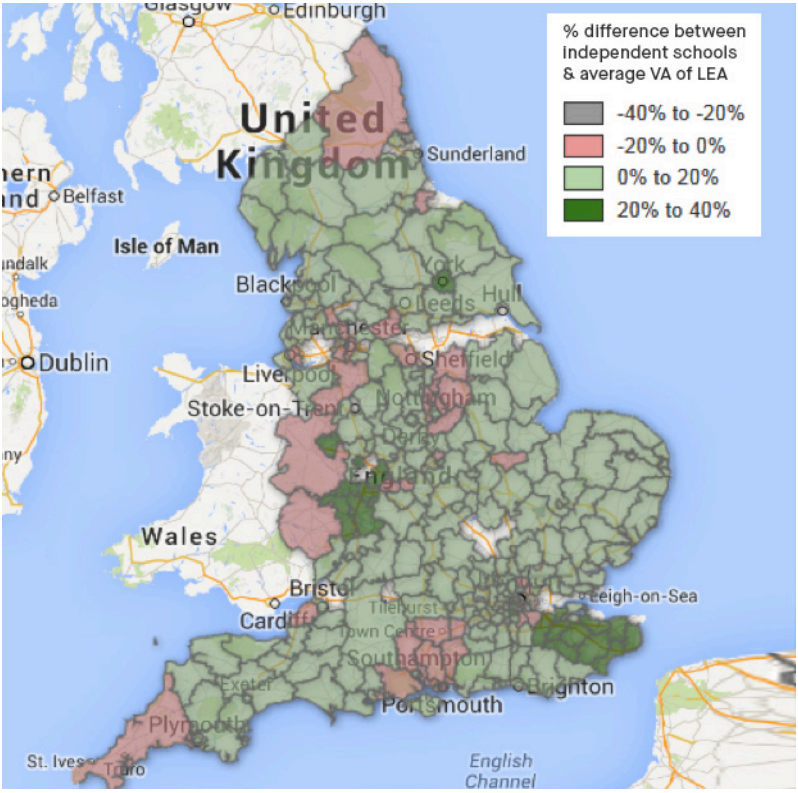
As Part I demonstrated, independent schools provide a significant earnings premium to the child, a significant proportion of which appears to be driven by access to university. However, as was noted also, the case for the state to intervene is strongest where it is clear that the educational benefits of attending an independent school outweigh those of attending a state school.

This is not always the case. While on average independent schools add more value than state schools, some state schools out-perform independent schools.

Using value-added (GCSE to A-level) as a scoring system, the heat map below illustrates the local authority areas in which the local independent schools out-perform or under-perform against local state schools (on average). It shows that in most parts of the country, using Value-Added (VA) scores independent schools out-perform state schools. In some areas, such as parts of Kent, the average VA for independent schools is

significantly higher (20% to 40%) than that of state schools. However, there are a number of exceptions – such as Cornwall and parts of the West Midlands – where state schools out-perform independent schools on average. Clearly, for a national scheme, it would be important to have VA data for 11-18 year-olds to ensure this analysis is robust.

**Figure 9: Comparison between average value-added scores of independent schools versus state schools by local authority area (pupils aged 16 to 18)**




*Source: SMF analysis of DfE data on value-added scores, 2010*

Note: the map shows scores by local authority boundaries. Where the local education authority area comprises more than one local authority, the average local education authority score is displayed. It should also

be noted that this heat map includes all independent schools (both day schools and boarding schools).

## Limiting participation of independent schools in the Open Access scheme

In a perfectly functioning market this might not matter: the decisions could be left to consumers who would select the school that provides the best educational opportunity in the local market. They could opt for better state schools if these outperformed lower-performing independent schools. However, as noted below, information constraints impede this. These problems may be exacerbated by the fact that poor-performing schools, which may struggle to fill their rolls, may have a stronger commercial incentive to participate in the Open Access scheme than better-performing schools. Therefore, were all independent schools (both the highest performing and the lowest performing) able to participate in the Open Access scheme, it is likely that some parents would opt for sub-par independent schools, resulting in unwarranted costs to the Exchequer and sub-optimal outcomes for the child.

The Sutton Trust is deliberately targeting high achieving independent schools as part of its Open Access scheme. The evidence above suggests that there is a strong case for regulating participation of independent schools in the Open Access scheme to ensure quality and to reduce the risk of the government wasting money on a poor investment.

**The market could be regulated in a number of ways:**

- Value-added scores provide a means of determining a school's educational performance and could be used as a method of selecting the best independent schools. For instance, participation could be limited to schools that perform better than the average across the state sector in each region or local authority.
- In the future, if independent schools were subject to the same regulatory authority as state schools then inspection reports could be used as a further means of identifying excellent and poor performers to include and exclude from the scheme respectively (for more discussion on regulation see below).

Whatever measure is used to determine participation, consideration should be given to continuity and sustainability. Given that joining and leaving the Open Access scheme would represent a significant change to the business model of the school in question, it would be undesirable for schools to oscillate in and out of the scheme year on year depending on each year's exam results (or other metric). On this point, it might be noted that VA scores often fluctuate considerably year on year. It would be destabilising for the schools, and the pupils already attending, if applicability for state subsidy changed on a year to year basis. Instead, continuity and security could be provided by using a rolling average over five years or alternatively requiring a certain percentage point reduction for a school's participation to be reconsidered.

Proceeding with such a policy requires two broader changes to the ways in which the performance of schools is measured. First, independent schools are not obliged currently to measure or report their VA scores, unlike state schools. They should be Limited data (for 16 to 18 year-olds) was gathered on a sample of independent schools for a period of time (up until 2010) but this no longer happens. Gathering this data would be a welcome development, irrespective of the adoption of the Open Access scheme, allowing greater transparency on school performance across the public / private divide. Second, the way that VA is measured will have to be revised so as properly to represent the educational value that different schools add. Current VA scores have a ceiling – in other words, the top grade is insufficiently nuanced to capture the difference between the very good and the utterly outstanding. Therefore, if a school starts with a high-ability pupil and adds significant value to her skills and capabilities during her time at the school the VA score may not pick up this improvement. To address this problem, VA should be calculated on the basis of exam scores rather than simply grades.

If stricter eligibility were applied to the scheme, this may affect cost. This is because better schools are likely to cost more (see 2.3 below). There may also be a trade-off in regard to participation if the Open Access scheme were to be expanded.

## Regulation

In this emerging hybrid market, where consumers have a greater choice over where their children are educated and in which state subsidy is extended to participating independent schools, there is a stronger case for consistency of regulation. It might be argued that the lines are already being blurred between the independent and state sector with the emergence of academies and free schools.

Ofsted currently inspects about half of independent schools (non-Association independent schools); the Independent Schools Inspectorate inspects all other independent schools (Association schools).[62] The Secretary of State Michael Gove recently suggested that the independent sector should be subject to inspection by Ofsted. [63] There should be room here for a system that allows greater consistency in judgements between the sectors, drawing on the best of the existing independent inspectorate and Ofsted.

### Proposals to improve the impact of the Open Access scheme

- Only schools that have a VA score which is higher than the average VA score for state educational in a local area should be admitted to the Open Access scheme.
- Independent schools should have to publish data on the value they have added to their pupils and publish VA scores through to Level 4.
- VA should be calculated on the basis of exam scores rather than simply grades.
- If the state were to subsidise children to attend independent schools, there is a strong case for ensuring that there is consistency in inspection for certain basic aspects of schooling that the government is likely to be interested in.

## 2.2 GREATER ACCESS FOR DISADVANTAGED PUPILS TO INDEPENDENT SCHOOLS

The Open Access scheme is designed to remove the financial barrier for entry to independent schools for those from low-income backgrounds thus boosting social diversity in independent schools. As mentioned earlier in this Chapter, the Belvedere Pilot between 2000 and 2007 led to double the number of girls on free school meals attending the school than the national average. Likewise, the Assisted Places Scheme saw 40% of all places given to those from working-class backgrounds.

However, the specific design of the scheme – from admissions through to outreach activity – is extremely important. For instance, the Assisted Places Scheme was criticised heavily for a disproportionate number of children from higher income backgrounds being able to take advantage of the state-subsidised places. The result was significant deadweight costs to the government. Meanwhile, as a recent report by the IFS for the Sutton Trust noted, 'less than three per cent of all pupils going to grammar schools are entitled to free school meals, against an average of 18% in other schools in the areas where they are located'. [64] This implies that there are likely to be obstructions to getting those from more disadvantaged backgrounds into independent schools even if their fees are paid.

Two principal factors may affect the social composition of participating independent schools:

- Admissions criteria may determine that some social classes are more likely to be offered places than others. For instance, the Open Access scheme Belvedere pilot included measures aimed to ensure that there was a level playing field for those who had not attended independent school before the age of 11: verbal and non-verbal reasoning tests were used on top of English and Maths tests; and test results were considered in relation to a detailed reference from the previous school attended. [65]

- Demand and take-up of the scheme may affect the likelihood of children from different social backgrounds applying for places and / or taking up places if they are offered.

## Admissions criteria

Selection on merit may be philosophically pure, but it may not result in children from a diverse range of backgrounds attending independent schools under the Open Access scheme. For instance, in the Belvedere pilot, girls from 'affluent achievers' background (high income families living in detached houses) were more likely to have been successful in the entrance tests than the 'have-nots' (single parent families, living in poor conditions, typically on income support) and the 'hard pressed' (living in council estates, and working in low skilled jobs or unemployed).[66] This story was repeated in relation to the social class of the father (as determined by occupation) – the children of unemployed fathers were much less likely to do well on the test than those whose fathers were professionals or managers.[67]

This suggests that affordability is not the only barrier to independent schools.

The analysis below uses newly-available data from the Millennium Cohort Study to simulate the effects of different admissions criteria on the social composition of independent schools. Our initial analysis compares the household incomes of the following groups:

- Children aged 11 who have already secured places at independent secondary school (as indicative of the current composition of independent schools).
- Children aged 11 who would gain a place at independent schools if independent schools selected solely on merit (as indicative of the composition of independent schools under the Open Access scheme proposal).

In carrying out this simulation, it should be noted that for statistical reasons we have applied the principle to all independent schools rather than just the hundred schools to which Open Access scheme is intended to apply.

## Millennium Cohort Study Analysis

We use data from Sweep 5 of the Millennium Cohort Study to examine the current socio-economic profile of children attending State and independent secondary schools in the UK and the potential impact of Open Access on this composition.

## Introduction to the Millennium Cohort Study

The Millennium Cohort Study (MCS) is a UK representative longitudinal dataset that follows the lives of 18,818 children born between September 2000 and January 2002 from birth through to adulthood. Each sweep aims to survey cohort members at key stages in their lives, with the first survey being carried out when cohort members were nine months old. By following cohort members through their life course, MCS enables researchers to examine how life factors and socio-economic characteristics affect the later outcomes in life. The original sample at sweep 1 surveyed children resident in the UK at age 9 months that were born between 1st September 2000 and 11th January 2002, whose families are eligible for child benefits. The MSC also oversampled children from deprived backgrounds and ethnic minorities.

## Millennium Cohort Study Sweep 5

For our analysis of Open Access scheme, we utilise data from sweep 5 of the MCS, which consists of a sample of 13,469 cohort members from 13,287 families in the UK. In this sweep, cohort members are 11 years old and in their final year of primary school. We analyse data on cohort members' secondary school selections/decisions, cognitive assessment scores and familial characteristics to examine the potential impact of the Open Access scheme.

## Cognitive Development Assessments in MCS 5

Just as in previous sweeps, MCS 5 conducts a range of assessments on cohort members to examine their cognitive development. Participation

in cognitive assessments is completely voluntary and consequently, the number of cohort members taking the assessments is 13,070 - less that the total number of cohort members successfully surveyed in this sweep. Three cognitive assessments are implemented in MCS 5 namely; the CANTAB Cambridge Gambling Task, the CANTAB Spatial Working Memory Task and the British Ability Scales Verbal Similarities. The British Ability Scales Verbal Similarities is an assessment that measures cohort members' verbal reasoning and vocabulary. Because the Verbal Similarities test is an assessment within the British Ability Scales, a leading standardised battery of subtests used to assess a child's cognitive ability and educational achievement, we use data from the verbal similarities test for our analysis of educational attainment of MCS 5 cohort members.[68]

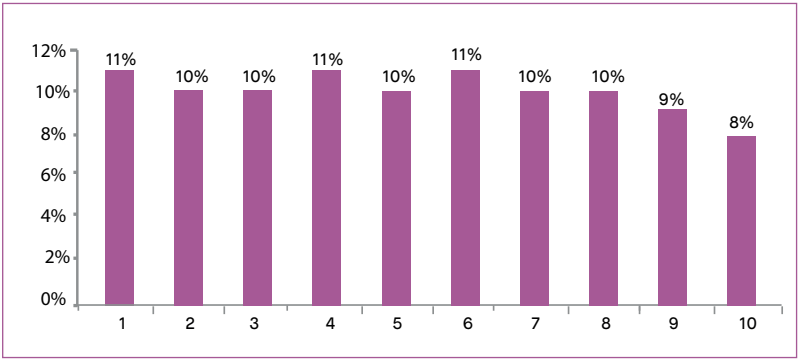
Additional information on the methodology used in analysing the MCS is provided in Annex.

## Current social composition of independent schools (by household income)

Around 6% of children in MCS wave 5 have places at an independent secondary school. This proportion is similar to that reported in the Department of Education's 2013 statistical release on the characteristics of schools, [69] providing reassurance that the sample in MCS 5 is similar to the profile of school-aged children in the UK. Figure 10 shows the household incomes of the parents of the children in the state sector. Overall, it can be seen that there is almost an equal likelihood that a child attending a state secondary school in the next academic session comes from any one of the income groups. The only noticeable difference is that the children belonging to families at the very top of the income distribution represent only 8% of the children attending a state secondary school suggesting that families in this decile group are less likely to send their child to a state secondary school.

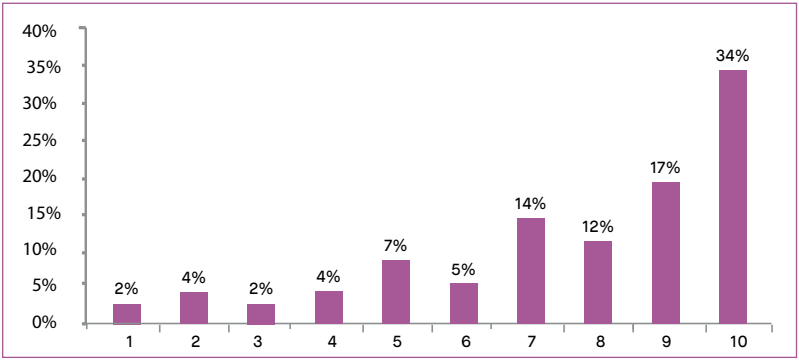
In contrast, Figure 11 shows the distribution for those with places at independent schools. A third of those with places come from the top decile of household incomes alone. Those in the top fifth of household incomes account for 50% of those with places at independent schools. In contrast, those in the bottom three deciles of household incomes account for just 8% of places at independent schools. Children from the 10th decile group are almost 17 times as likely as to attend a fee-paying secondary school than children from the 1st decile group.

Figure 10: Household income decile groups: Children Attending a State Secondary School




*Source: SMF analysis of MCS*

Figure 11: Household income decile groups: children with places at independent secondary schools [70]



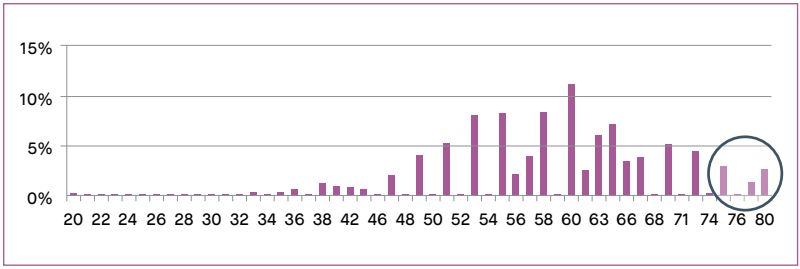

*Source: SMF analysis of MCS*

## Estimating the effect of switching to selection by merit in all independent schools

So, what would happen to the make-up of independent schools if candidates were selected purely on merit? To simulate this scenario, our analysis looked at those children that performed best at age 11 in verbal reasoning tests and then looked at their social backgrounds. It should be noted that these are simulations are based on all independent school places and assumes that the likelihood of any child applying to independent school is constant.

Figure 12 below shows the distribution of test scores for 11 year olds in the MCS. It shows that 3% achieved top marks (80 out of 80); 4% obtained 77 or more; and, 7% obtained a mark of 75 or more (see blue circle).

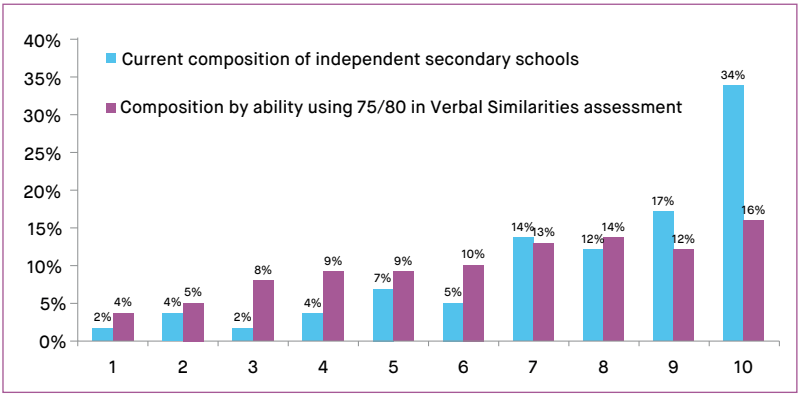
**Figure 12: Distribution of verbal similarity test scores of all 11-year olds**




*Source: SMF analysis of MCS*

We can estimate what the social composition of independent schools would look like if these schools selected purely on merit (test results) at age 11 by looking at the social background of these 7% of children who scored 75 or more out of 80.[71] This is displayed in Figure 13 below.

Figure 13: Household income decile Group of Children Scoring 75/80 in verbal similarities test compared with the current decile group composition of independent secondary schools.




*Source: SMF analysis of MCS*

As the graph above shows, selecting by merit (test score) would significantly alter the social composition of independent schools from the status quo. Overall, the distribution is much flatter meaning that there would be much greater socio-economic diversity in independent schools. Most notably, there is a dramatic reduction in the proportion of children that would come from the top decile of household incomes (the proportion would roughly halve). There is also a very significant increase in the proportion of children that would come from the bottom four deciles (the proportion would more than double).

This suggests that if an Open Access scheme was applied generally that it would significantly increase the number of children from more disadvantaged backgrounds at independent schools (by a factor of about two and a half) and halve the number from the wealthiest households.

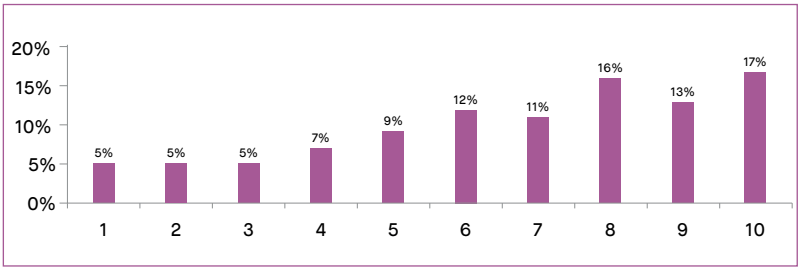
Notwithstanding this significant change in composition, the skew in favour of children from better-off families still remains very marked (albeit much weaker than is currently the case).

## Alternatives and complements to selection by merit: earlier selection and positive discrimination

To address this continued bias in favour of children from more privileged backgrounds, policymakers could adopt a number of responses. First, the policy could be applied earlier in the life of the child. Selecting on merit earlier may boost the chances of those from more disadvantaged backgrounds of gaining entry to independent schools. For instance, the evidence suggests that ability is more socially heterogeneous when children are younger. Such a policy could eliminate any additional comparative gains that children from more privileged backgrounds make during primary school years.

Our analysis suggests, however, that this policy is unlikely to deliver improvements to the social composition. Figure 14 shows that at age 7, the distribution of those achieving full marks in a reading test is, if anything, less flat than it would be were selection by merit to take place at age 11.

**Figure 14: Decile Group of Children Scoring Full Marks in MCS 4 BAS Word Reading Test**

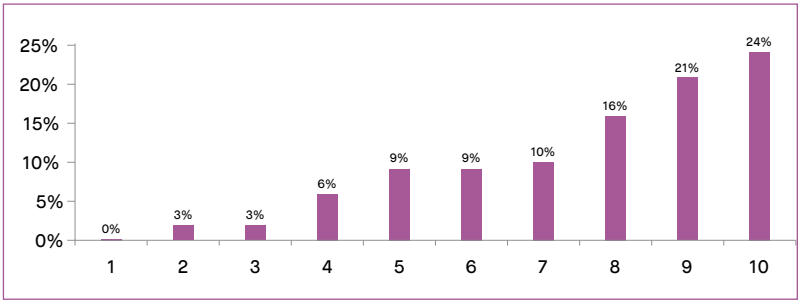



*Sample size: 466*

*Source: SMF analysis of MCS*

When the exercise is repeated for children aged four (i.e. we look at the household incomes of the 4-year-old children who achieve the top 7% of marks), we see that once again that selection by merit at an earlier age simply exacerbates the social mix problem.

Figure 15: Decile Group Composition of 75/80 MCS 3 BAS Naming Vocabulary




*Sample: 325. Note, the cut-off mark of 75 out of 80 has been used here because a higher cut off mark reduces the sample size significantly. It should be noted that the distribution across deciles is similar if the threshold is set at 80 out of 80; 77 out of 80; or (as above) 75 out of 80.*

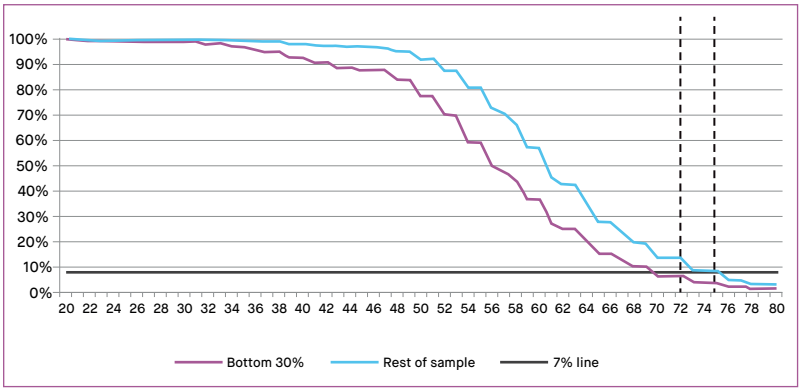
*Source: SMF analysis of MCS*

Therefore, differences (either innate or developmental) associated with parental background show up by age four as clearly as by age 11. It might be noted that a policy to select at age four or seven would also be beset with practical difficulties, either requiring the Open Access scheme to operate in independent primary schools (and thus costing the government much more money) or arbitrarily selecting children at age 4 or 7 for their school place at age 11. There is a strong case for the Open Access scheme to apply from age 11.

A second means of achieving a better social mix beyond selecting by merit would be to discriminate positively in favour of those from more disadvantaged backgrounds. Again this policy could be applied in a number of ways: by setting quotas depending on household incomes; by reducing the threshold test scores required for entry for those from lower income households; by setting up selection processes that take greater account of the background of applicants, either by re-designing examinations, and / or taking account other contextual information.

If the government were seeking to ensure that an Open Access scheme evened out the chances of children from different financial backgrounds to benefit from private education it could make a lower academic requirement of children from poorer households compared to their better-off peers. Below we seek to simulate what difference it would make to selection by merit if the scheme demanded that the bottom three deciles were allocated 30% of the places at independent schools. Figure 16 below demonstrates the distribution of scores for the bottom three deciles (in purple) versus the scores for the top seven deciles (blue).

**Figure 16: Test scores for the bottom three deciles versus the top seven deciles**




*Source: SMF analysis of MCS*

The chart demonstrates that to achieve an equal proportion of children from the bottom three deciles to be selected for independent school as those from the top seven deciles, then the threshold test score for the former would have to be reduced to 72 for the low income group (bottom three deciles) compared to a score of 75 for the rest (top seven deciles).

This approach would mean that some of those in the top 70% who would otherwise have been selected on merit would by definition lose out. Such positive discrimination could also adversely affect the credibility of the scheme, although it should be noted that such contextual admissions are

widely used in the university sector, including in US Ivy League institutions. Nonetheless, it may be better to seek to improve participation by other means. Options include:

- Altering the type of examination that applicants sit (to reduce the advantage going to those who may have been trained for specific types of tests). As the Sutton Trust has argued elsewhere in relation to examinations that determine entry to grammar schools: "schools should carefully assess their testing system to ensure that the 11+ tests they use for selection do not act as a barrier for high achieving students from some social or ethnic communities."[72] The same message would apply to independent schools under the Open Access scheme.
- Providing tailored tutorial support to those from more disadvantaged backgrounds. [73]
- Promoting the availability of Open Access places through master classes and other activities. In the Belvedere pilot, this was done through Saturday master classes at the school, which also helped to provide additional academic opportunities for potential applicants.
- The Belvedere pilot included targeted outreach to provide information for, and support to, local families. This involved a full-time recruitment officer who visited local schools to speak to children, parents and teachers. This officer also offered confidential assistance to families seeking to complete the financial application forms. [74]
- Requiring Open Access schools to fill a minimum quota of places with those from more disadvantaged backgrounds. This would mirror the pupil premium preference in academies and what a number of grammar schools propose doing by reserving some places for children of those from disadvantaged backgrounds. [75]

## Means-testing

The predecessor scheme for opening access to independent schools – the Assisted Places scheme – was criticised by some for being open to dominance by middle-class parents and for failing to provide a

sufficient number of places for those from disadvantaged backgrounds.[76] The evidence suggests that it provided more opportunities for those from middle-income backgrounds, but that a more modest number of entrants from poor backgrounds were able to gain places.[77] As one study found, 'Assisted Places had special appeal for relatively impoverished or otherwise financially insecure middle-class families alert to a new opportunity to enhance the prospects of an able child."[78]

The section below discusses the opportunities to boost demand and take-up for the scheme from those from disadvantaged backgrounds. However, while it is impossible to structure a means-testing system that is entirely immune to gaming, policymakers may also want to limit the opportunities for middle-earners and high-earners to take advantage of loopholes in the rules. The means-testing threshold is likely to be extremely important in determining the success of the scheme. It might include a mixture of income measures, government classifications (such as entitlement to certain benefits or eligibility for the Pupil Premium) and potentially wealth and assets of the households. For instance, thresholds could be set for income and for non-housing wealth.

## Take-up

The analysis above assumes that parents are equally likely to take up the opportunity of a place at independent school. However, it is one thing supplying additional quality places, but will parents from more disadvantaged backgrounds send their children to these schools? Other factors may affect take-up, including awareness of the scheme; and parental demand for these places may vary with social backgrounds.

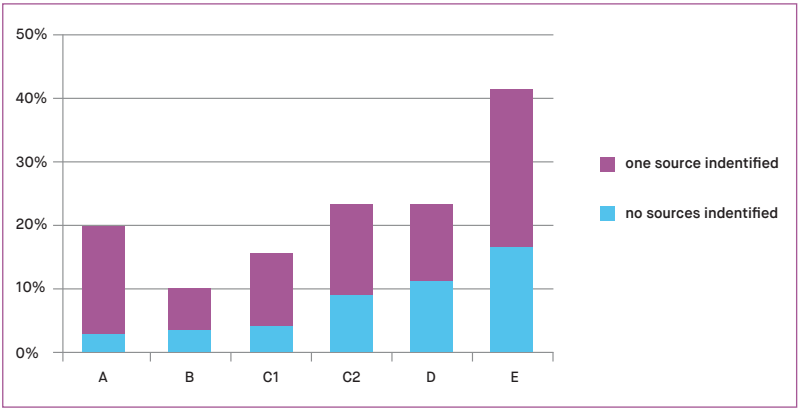
As noted earlier, take up in the Belvedere School pilot was generally good. Candidates came from a large number of primary schools. Applicants were also generally in line with the make-up of the local population. [79]

## Seeking out quality

Evidence suggests that existing consumers of independent education take account of quality and price in making their decisions.[80] However, this finding applies to those parents that currently send their children to independent school, whereas Open Access is interested in the demand that other parents would display for private schooling and the extent to which they would seek out quality independent school places for their children.

Polling evidence shows that a majority of parents (57%) report that they would send their child to an independent school if they could afford it.[81] For those who send their child to an independent school, the most important reason by far was 'better standards of education'. However, as Professors Francis and Hutchings have argued, 'some parents are better able to exercise and effect choice than others.' [82] Figure 17 below illustrates the proportion of parents across social groups that make use of no (informal or formal) sources before choosing their school and those who use only one such source. The proportions are much higher in lower social classifications than higher ones.

**Figure 17: Percentage of parents that made use of no sources or only one source of information in making a decision on their child's schooling**




*Source: Francis and Hutchings, Parent Power?*

In addition, lower social grades are more likely to be sceptical of the benefits of independent education. 46% in classification E 'believe that educational standards in state school are lower than independent schools' compared to 60% of those classified as A.[83]

Finally, a recent review of parental preferences in choosing a school, showed that preferences differ according to socio-economic background: 'those in the lowest SES group in particular have distinct preferences, with negative demand responses to increases in academic quality, and positive demand responses to decreases in the socioeconomic composition of the school'.[84]

Put together, this evidence implies that many from lower socio-economic backgrounds are likely to recognise the potential advantages of private education, but that some may be unable or unready to make decisions on the basis of quality.

As a result, demand from lower-income households may be weaker than from higher-income households, with consequences for take up.

If Open Access was accompanied by significant outreach and communication activity, the scheme could boost awareness of its benefits and therefore the number of applications. It might be noted that the Belvedere pilot had significant numbers of applications from those from more disadvantaged backgrounds and this may have been driven in part by the outreach activities carried out.[85]

## Effects on the composition of state schools

Given concerns about the effects of selection in education on the background and abilities of those attending comprehensive schools, policymakers may wish to understand the level of change that the Open Access scheme would have on the pupil composition at state schools. For instance, if the scheme removes high-performing children from state schools, this could have an impact on the educational outcomes of the remaining pupils in those schools. By definition, altering the composition of independent schools will alter the composition of state schools as well.

Two things should be noted. First, while a significant literature has built up over the years exploring the effect of peers on a child's educational performance, a recent analysis has concluded that 'school-level peer effects exist, but they are small in magnitude'.[86]

Second, the change to the composition of state schools would be marginal. Assuming that 100 independent schools participated in the Open Access scheme, that these schools comprised 62,000 pupils and that two thirds of these pupils were displaced from state schools into the independent sector, this would move some 42,000 pupils from state schools to independent schools. This equates to about one percent of the 3.9 million pupils attending mainstream secondary schools – or about ten pupils for a typical 1,000-strong secondary school.[87]

By giving 42,000 places at top independent schools to children that would – in the absence of the Open Access scheme – have gone to state school also opens questions as to where these 'displaced' children would go. It is extremely difficult to make any confident estimates of the number of 'displaced' pupils who may be absorbed by other independent schools or take up places in the state sector.

Based on the Sutton Trust's original projections, 13,800 pupils would return to the state sector. These individuals would – by definition – be less academically capable than those offered places through the Open Access scheme. There is no reason, therefore, to expect an influx of exceptionally bright pupils into the state sector from families who previously would have sent their children to independent school. However, the scheme could achieve a better mix of children from different socio-economic backgrounds.

### Proposals to improve the impact of the Open Access scheme

Our analysis indicates that needs-blind admission that selects pupils into the Open Access scheme on merit will increase the proportion of disadvantaged children benefiting from a independent school education. However, under this selection policy, pupils who come from wealthier backgrounds would continue to significantly outnumber those from poorer backgrounds. A collection of policies could help to improve the social mix further, including:

- Setting a lower academic benchmark for children from more disadvantaged backgrounds.
- Providing support to parents and pupils from disadvantaged backgrounds, such as free tutoring.
- Designing entry exams and selection processes so that they are as unbiased as possible in terms of applicants' socio-economic status and prior schooling.
- Providing outreach work to raise awareness of the scheme to encourage children from more disadvantaged backgrounds to apply.

## 3. COSTS OF THE OPEN ACCESS SCHEME

It is not possible to assess the value-for-money of the Open Access scheme without comparing it with other measures that would use other methods to achieve the same ends (for instance, spending additional money through the state school system). However, we can estimate the potential costs under different scenarios with the Open Access scheme.

## The Sutton Trust's initial costings

The Sutton Trust has forecast that their proposed scheme would cost £176 million per year. This is based on the following assumptions:

- 100 independent day schools participate in the scheme equating to a total of 62,000 places available under the Open Access scheme.
- Two thirds of pupils (41,300) joining participating schools would otherwise have gone to state school. One third would have gone to independent school in any case.
- A third of pupils at participating schools will have their fees fully subsidised, a third will have their fees part-subsidised and a third will not have any of their fees subsidised. This means that the state would pay 50% of all fees at participating schools.
- The average fee at each school is £11,000 per year. This leads to a total cost of £341m.

However, there are additional assumptions that provide offsetting savings:

- One third of the 41,300 vacated places in state schools would be taken by those pupils displaced from independent schools. The remaining 27,500 pupils would find other independent schools to provide for them. The state would therefore not have to pay the per capita charges to put these 27,500 pupils through state education.
- The cost of a place at state school is £6,000 per pupil per year (including capital expenditure)
- The state would save £165m per annum by having to put fewer pupils through state schools.

Using the Sutton Trust's assumptions, the costs to the Treasury of introducing the scheme would be £176m per annum. Below we consider the following variables that could affect the predicted cost to the Exchequer:

1. Fee levels at independent school.
2. The background and in-take from different socio-economic backgrounds and the requirement for subsidy.
3. The destination of those pupils who get displaced from schools participating in the Open Access scheme, with specific regard to whether or not they return to the state sector.

## 3.1 FEE LEVELS

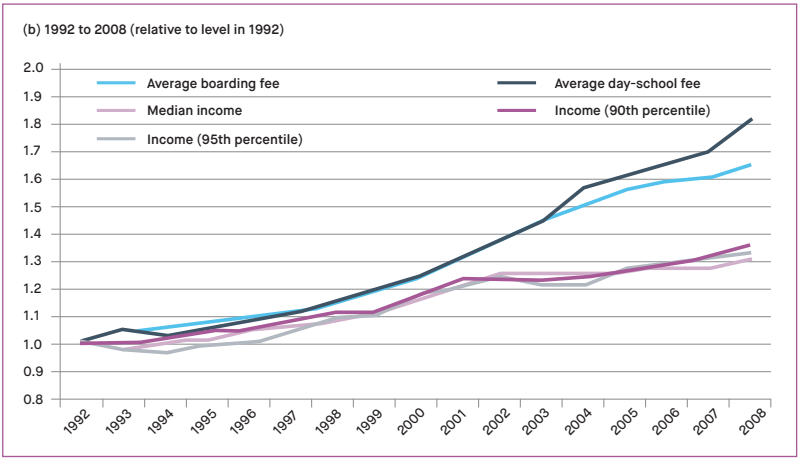
Fees have increased since the Sutton Trust published its report. According to the Independent Schools Council, the average annual fee for day schools is now £12,582.[88]

However, certain other factors may affect the fee levels. As noted above, it is not desirable for poor performing independent schools to participate in the scheme. It is unclear whether high-performing independent schools always charge higher fees, although in a private market a significant correlation could be expected. This suggests that the £12,582 may be an under-estimate of the ultimate costs. For instance, the ten top-performing day schools in our value-added analysis had higher average fees of £13,595.

Set against this is the fact that average per pupil costs to the state system have also risen. In 2012-13, the average costs for a state pupil were £6,350.[89] In addition, given that expenditure on state schools is higher per capita in London than outside the capital, consideration should be given to providing a subsidy to cover these higher costs in London.[90]

A second policy consideration is how government can be confident that it can contain the future costs of the scheme. Between 1992 and 2008, the average fee across all independent schools rose 83% in real terms, well above average wage growth for the same period. For their part, participating institutions will need clarity about the deal for funding.

Figure 18: Average school fees and household disposable incomes amongst families with children, 1992 to 2008 [91]




The costs could be controlled by capping the subsidy and allowing it to rise only by inflation or by the level of change to the per capita spending in the state system. It should be noted that there may be a trade-off: the tighter the control on the subsidy, the less likely it is that the best schools will want to participate as they could do better by only catering to fee-payers. In addition, the structure of the funding may be important for participating institutions. Considerations may include certainty about participation and clarity over how the Government will treat the capital component of the payment (i.e. will the capital component be treated as a revenue sum and who will own the asset)?

## 3.2 BACKGROUND OF PARENTS

The Sutton Trust's cost estimate is based on the scheme being a success in attracting and admitting pupils from a range of backgrounds so that a third of the parents require full subsidy; a third require part subsidy; and, a third require no subsidy (i.e. pay full fees).

However, as Section 2.2 above showed, the composition of pupils participating in the Open Access scheme may vary depending on a number of factors. This could have a significant effect on costs. In the box below we set out two core scenarios for gross costs (i.e. not incorporating potential savings by reduced expenditure on the state system).

### Cost implications of the socio-economic background of parents of children admitted to Open Access scheme

Assumption: independent school fees of £12,582 per year.

**Scenario 1: Open Access scheme achieves its objectives for widening participation**

Under this scenario:

- the bottom third of the sample (by income) would account for 33.3% of the places – fully subsidised = £260m
- the middle third of the sample (by income) would account for 33.3% of the places – half subsidised = £130m
- the top third of the sample (by income) would account for 33.% of the places – no subsidy = £0m

**Total gross costs = £390m**

**Scenario 2: Needs-blind admissions based on academic merit (on basis of MCS data)**

Under this scenario:

- the bottom third of the sample (by income) would account for 20% of the places – fully subsidised = £156m
- the middle third of the sample (by income) would account for 33% of the places – half subsidised = £130m
- the top third of the sample (by income) would account for 47% of the places – no subsidy = £0m

**Total gross costs = £286m**

Clearly, the costs of the scheme are higher the larger the proportion of children that come from poorer backgrounds and require state subsidies.

## 3.3 DESTINATION OF PUPILS

The final aspect of the scheme that will have significant implications for the costs of the scheme is the assumption about the numbers of 'displaced' pupils that return to the state system. In its original costings, the Sutton Trust estimated that one third of the 41,300 vacated places in state schools would be taken by those pupils displaced from independent schools. The remaining 27,500 pupils would find other independent schools to provide for them – in other words the independent sector would expand to accommodate them. The state would therefore not have to pay the per capita charges to put these 27,500 pupils through state education. On this estimate, the government would save £175m per annum on state school places that did not have to be provided.[92]

There is no evidence to suggest whether this is a reasonable estimate of the number who may end up in the state system. But, it remains a very important part of the cost equation. Two other scenarios are worth considering, both made on the assumption that each pupil costs £6,350 per year to put through state school:

- All pupils being absorbed into independent schools (explicable on the basis that these pupils would otherwise have been attracted and admitted to fee-charging independent schools; and that the market has flexibility to expand). Cost savings of £262m per annum.
- One third of pupils absorbed into independent schools (explicable on the grounds that the market may take time to respond and find it difficult to replicate the high value services of the schools that have opted into the Open Access scheme). Cost savings of £87m per annum.

There are no natural experiments to guide us in estimating the destination of parents who would previously have selected an independent school.

On the basis of this review of the costs, it is clear that there are a number of important unknown factors that may affect the costs of the scheme. Below we set out high, middle and low estimates for the costs of the Open Access scheme.

Table 2: Cost estimates for the Open Access scheme

| | Assumptions | | | Total Cost |
|---|---|---|---|---|
| | Fees level | Parental background | Savings on state school expenditure | |
| High estimate | £13,600 | State pays half of all fees (£422m) | One third of pupils absorbed into independent system; two thirds have to be covered by state -£87m | £335m |
| Middle estimate | £12,582 | State pays half of all fees (£390m) | Two thirds of pupils absorbed into independent system; one third have to be covered by state -£175m | £215m |
| Low estimate | £12,582 | Selection on merit with no positive discrimination. State pays 37% of fees. (£286m) | All pupils<br><br>-£262m | £24m |

## Alternative forms of funding

Finally, it may be worth considering whether there are alternative or complementary means of funding the Open Access scheme. As noted earlier, the Belvedere School pilot was funded by philanthropic donations. Given the significant efforts expended by independent schools to bring in philanthropic donations at an institution level, it seems very unlikely that sufficient money could be raised at an aggregate level to fund a scheme such as the Open Access scheme to the scale envisaged to make a significant difference in the intakes of the best independent day schools. Bursaries from the independent sector are sizeable but not large enough to cover the costs. A survey of schools that are members of the Forum of Independent Day Schools and the Girls' Day School Trust showed that 4% of students were on full bursaries and 10% were on partial bursaries (across all age groups).93 There are higher proportions of students in the sixth form receiving both full and partial scholarships (5% and 13% respectively) than those in younger year groups (3% full and 6% partial).

Meanwhile, the total for all means-tested bursaries for the 1,223 schools that completed the Independent Schools Council survey in 2013 was £303m, equivalent to £0.25m per institution.[94] Assuming that schools participating in the Open Access scheme had available the average level of means-tested bursaries, then the 100 schools would have £25m to spend on means-tested bursaries compared to our central estimate above of £215m to pay for the scheme.

There may, however, be ways for the government to regulate the use of existing bursaries and scholarships, which could potentially raise additional case for the scheme. For instance, in return for charitable status or for participation in the Open Access scheme, institutions could be compelled to provide scholarships on the basis of financial need rather than any other selection criteria. At the very best, this might double the amount available to put into the scheme (to say £50m) but still leave it way off the £215m per year needed.[95] In addition, such regulation would significantly reduce the attractiveness of the scheme to schools.

Mandating what financial support is given by independent schools may also be impossible given the terms of different endowments.

A second possible route for paying for the scheme would be for wealthier parents to cross-subsidise (either partly or entirely) the costs of those on lower incomes. However, given that this is a voluntary scheme, and that only a small proportion of the total number of independent schools would participate, cross-subsidies would likely put these schools at a competitive disadvantage compared to other schools as they would have to demand higher fees. Again, it is likely that such an approach would also disincentivise schools from taking part.

Together these factors mean that state subsidy appears the most (perhaps the only) feasible option for funding the scheme on the scale envisaged.

# ENDNOTES

1. Data on value-added scores from independent schools is very limited, and does not allow us to analyse progress between ages 11 and 16
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3. Sutton Trust, *The Educational Backgrounds of Leading Lawyers, Journalists, Vice Chancellors, Politicians, Medics and Chief Executives* (2009)
4. Sutton Trust, *The Educational backgrounds of 500 leading figures* (2007)
5. Higher Education Funding Council for England, *Higher Education and Beyond* (2013)
6. Francis Green, Stephen Machin, Richard Murphy and Yu Zhu, "The Changing Economic Advantage from Private Schools", *Economica*, Volume 79, Issue 316, pages 658–679, October 2012
7. OECD, PISA 2009 Results: *What Makes a School Successful? Resources, Policies and Practices* (Volume IV, 2010), Tables IV.3.9 and IV.2.4c
8. Department for Education England GCSE results data, 2012, Excludes special schools.
9. AAB or higher in facilitating subjects, i.e. Mathematics and Further Mathematics, English (Literature), Physics, Biology, Chemistry, Geography, History, Languages (Classical and Modern)
10. Department for Education England GCSE results data, 2012, Excludes special schools.
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12. K. Parel and R. Adams, 'Oxford University data shows private school A-level pupils' advantage', *The Guardian*
13. Independent schools Council, *Parental Attitudes Survey 2011* (http://www.isc.co.uk/press/press-releases/2011/2011-11-16)
14. Chris Ryan and Luke Sibieta, *Private schooling in the UK and Australia* (Institute for Fiscal Studies, 2010)
15. Department for Education, *Statistics: school and pupil numbers*. National tables: SFR21/2013. Department for Education, www.gov.uk, July 2013; Green et al, 'The changing economic advantage from private schools'
16. A third of all students at independent schools receive bursaries and scholarships. Nonetheless, most of the financial helps goes to well-off parents with very bright children, parents who have fallen on hard times, and the schools' own teachers
17. Ryan and Sibieta, *Private schooling*
18. Becky Francis and Merryn Hutchings, *Parent Power? Using money and information to boost children's chances of educational success* (Sutton Trust, 2013)
19. Independent Schools Council, *Annual Census 2014*
20. Stephen Gibbons, Stephen Machin and Olmo Silva, *Valuing school quality using boundary discontinuities*. CEE discussion papers, CEE DP 132 (LSE, 2012)
21. Ryan and Sibieta, *Private schooling*
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49. See annex
50. More details are contained in the annex
51. See annex
52. Private schooling still seems to be relevant, but our reduced sample size means that we are unable to estimate the effect very precisely

53. More details are set out in the annex
54. A selective university is defined as selective according to the Sutton Trust 30 definition: The Sutton Trust 30 grouping of highly selective universities comprises universities in Scotland, England and Wales with over 500 undergraduate entrants each year, where it was estimated that less than 10 per cent of places are attainable to pupils with 200 UCAS tariff points (equivalent to two D grades and a C grade at A-level) or less. These 30 universities also emerge as the 30 most selective according to the latest Times University Guide. See Sutton Trust, *Degrees of Success*: *University chances by Individual School* for more information
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94. See ICS Census 2013
95. See ICS Census 2013, which shows that total bursaries are roughly twice that of means-tested bursaries

# Open Access
## An independent evaluation

This paper shows that during a person's early career – between the ages of 26 and 42 – someone attending independent school will earn on average £193,700 more than someone attending a state school.

However, the vast majority of pupils who attend independent schools come from wealthy backgrounds and the opportunity to benefit from an independent education is typically determined by the ability to pay the fees. This research paper uses new data to explore the premium that derives from attending independent schools and the factors that contribute to it. It then evaluates a proposed policy – the Sutton Trust's Open Access scheme – to improve access into independent schools for those from more disadvantaged backgrounds.

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