Private benefits? External benefits? Outcomes of private schooling in 21st Century Britain.

Francis Green,* Jake Anders,* Morag Henderson* and Golo Henseke*

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*UCL Institute of Education.

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Introduction

Those educated in Britain's private schools[1] in the last century not only did well in their education (e.g. Sullivan and Heath, 2003), but also came to occupy prominent places in society (Reeves et al., 2017), and on average had substantially greater success in the labour market (e.g. Dearden et al., 2002). With access to private schools largely determined by family resources, the schools' successes were held to contribute to the problem of low social mobility. The main policy response was the Assisted Places Scheme (APS), begun in 1981, through which the government funded the fees for some children from low-income families (Whitty et al., 1998). Since the 1980s, however, the schools have undergone substantial changes, of which the most important is that the resources expended per pupil have grown threefold in real terms (Green et al., 2018b). Meanwhile the policy orientation moved away from partial government funding, towards monitoring and regulating more closely the schools' status as charities. As a means of justifying their charitable status in law, private schools began to emphasise their contributions to 'public benefit', in addition to the private advantages accruing to their pupils (Wilde et al., 2016). Accordingly there is a need, both for updated evidence on labour market outcomes, and for evidence on broader outcomes said to be associated with public benefits. This paper presents estimates of the association of these outcomes with a 21st century private education in England.

Unlike in many countries, Britain's private schools do not have a specifically religious raison d'être, since there are many faith-based schools in the state sector. Nor are they now subsidised by government, beyond certain tax exemptions, putting Britain among only a minority of countries: in Australia, for example, government funds more than half of private school resources (OECD, 2012, p. 21); in France, the government funds private school teachers. But what particularly mark Britain's private schools out as unusual, however, are their very rich endowments and especially

high fees, giving them a three-to-one advantage over state schools in terms of resources per pupil (Green and Kynaston, 2019).[2]

The prospective outcomes are a natural concern for parents, for whom the cost of private education is vastly greater than in earlier decades. By the same token, to the extent that the benefits are high, policy issues surrounding private schools' role in limiting social mobility are likely to persist. Recent expressed concerns surround the disproportionate representation of private school pupils in high-ranking universities and in influential positions in the worlds of politics, law, culture and sport (e.g. Social Mobility and Child Poverty Commission, 2014). Proposed policies that would place state school children in private schools at the state's expense (e.g. Sutton Trust, 2015; Green and Kynaston, 2019) could be effective only to the extent that those schools do provide a high quality education and a route to rewarding jobs. A better understanding of the claimed external benefits should also contribute to our understanding of whether there is justification for the policy of affording tax advantages in return for the benefits of charitable status.

In what follows, we first outline the context of British private education and review what is currently known about their effects. We then describe our data and all relevant measures. We use data from a recent cohort of 'millennials', the *Next Steps* study of young people born in England in 1989-90, who were interviewed during their secondary school years between 2000 and 2007, and again in their early adulthood in 2015. In Section 4 we present both our descriptive and analytical findings. Controlling for a rich array of socioeconomic and demographic background variables, we estimate how private schooling is associated with pay and occupational status at age 25, and with three external benefits: attending meetings of local groups/voluntary organisations, doing unpaid voluntary work/giving unpaid help to others, and charitable giving/fundraising. Section 5 concludes by discussing the limitations of our estimates, and the implications for the

policy discourse.

2. Private and External Outcomes from Private Schooling in Britain

Context

Private schools are found right across Britain but regionally concentrated in the more affluent regions, that is, London and the South East of England and, within Scotland, Edinburgh. Approximately 10 percent of schools in England are private, funded through fees and, to a lesser extent, endowments from earlier donations and investments. They are autonomously governed and do not have to follow the national curriculum; however, they are constrained by national exams which form the gateways to the UK's hierarchical university system, by loosely-binding standards regulation and by general employment law. Despite this autonomy of governance – argued by some to support more efficient school management in some contexts (Hanushek et al., 2013) – and despite some degree of modernisation in manageral methods since the 1980s (Peel, 2015), there is no evidence that Britain's private schools are better managed than state schools. The same is true for Canada, the US, Sweden and India, though not Brazil (Bloom et al., 2015; Bryson and Green, 2018). Many face considerable pressures of competition for students, though there is excess demand for places at the top schools. One in two private secondary schools select their children using academic or sporting ability criteria, unlike in the state sector where only 5 percent of secondary schools – the grammar schools – select on academic grounds. Approximately three quarters of private schools are legally constituted as charities, under the 2006 Charities Act; this means that they are exempt from taxation on any surpluses they may make, and from 80 percent of local taxation on their properties; they are also exempt from Value-Added-Tax.

Their fees, continually rising ahead of inflation, had reached approximately half of median family income in 2015 (Green et al., 2018b). Consequently, it is mainly only those with very high incomes, or with personal or family wealth, who can afford private schooling. Some 18 percent of below-median-income families with children at private school access bursaries or scholarships, worth on average a third of the annual fee (Henseke et al., 2018); yet only 1 percent of private school pupils pay no fees at all. Regularly, private school pupils score substantially higher than state school pupils in national exams, and disproportionately gain places at high-ranking universities. Private schools are, in effect, the elite sector of education in Britain (Maxwell and Aggleton, 2015; Reeves *et al.*, 2017), even if they vary in their affluence, fees, and degree of selectivity.

Along with the fee rises, and further supported by growing donations and investment returns, private schools' resources have grown enormously since 1980. The modern-day three-to-one resource gap is partly reflected in more teachers per pupil, twice that of the state sector; and partly in much-better-equipped facilities and far more non-teaching staff, enabling private schools to deliver a broader education, with a large variety of sporting, cultural and other extra-curricular activities. The economic environment is also transformed from earlier decades, including greater inequality at the top of the income distribution from the 1990s onwards. Meanwhile the resources available to state schools have risen to a far lesser degree (Belfield and Sibieta, 2016). On the policy front, the focus switched from the APS – abolished in 1997 – to the schools' charitable status and associated tax exemptions. The 2006 Charities Act and subsequent court action clarified that private schools registered as charities are under an obligation to provide a 'public benefit', but they can decide themselves how to provide that benefit (Wilde et al., 2016). Private schools could 'partner' with state schools and provide fee-reductions through bursaries for low-income pupils;

but 'public benefit' has also been construed as inculcating in their own pupils an ethos of service to the communities in which they will live beyond school – in effect delivering an 'external benefit' (in the economic sense).

Expected Outcomes and Previous Evidence

While there is some mixed evidence about positive private school effects on educational outcomes of low-income pupils in the United States, studies from several developed countries have found no significant effects from attending private schools, once social background is controlled for (Dynarski, 2016; Pianta and Ansari, 2018; Carbonaro, 2006; Elder and Jepson, 2014; Jepson, 2003; Lubienski et al., 2008). These findings contrast, however, with findings for Britain. Several studies of people who had been at school in the 20th century show positive effects on educational achievements, aspirations, locus of control and later life outcomes (Halsey et al., 1980; Feinstein and Symons, 1999; O'Donoughue et al., 1997; Malacova, 2007; Parsons et al. , 2017; Sullivan and Heath, 2003; Sullivan et al., 2018a; Dearden et al., 2002; Green et al., 2011; Mcknight, 2015; Green et al., 2017; Sullivan et al., 2018b; Green et al., 2018a).

More generally, studies have shown the continued highly disproportionate prevalence of privately educated people in positions of leadership in public and private life – including business, politics, the law, journalism, the military, and the civil service (Kirby, 2016). The achieved wage premiums are shown to be largely due to the higher educational qualifications achieved by private school pupils, but not entirely; a direct (sometimes referred to as 'residual') premium, after taking account of human capital, is sometimes attributed to social networks, to industry selection, or to valued non-academic outcomes from schooling, though there is relatively little formal evidence in support of these conjectures (Marcenaro-Guierrez et al., 2014; Ashley et al., 2015; Green et al., 2017; Macmillan et al., 2015; Green et al., 2018a).

Theory and other evidence suggest two main explanations for the positive effects of Britain's private schools. Most straightforwardly, the educational effects can be seen as a consequence of the superior resources: even with much lower resource gaps, recent high-quality evidence supports the production function view that more resources in schools yields better outcomes (Frederiksson et al., 2013; Jackson et al., 2016). In addition, there is good general evidence of peer effects on academic performance and other outcomes (Sacerdote, 2011); it is likely that some of British private schools' positive effects are attributable to the schools' concentration of higher social class pupils (Green and Kynaston, 2019, pp 109-111).

Following the striking increase in private schools' resources over recent decades, one would expect to find larger positive effects, including on labour market rewards, from private schooling in 21st century Britain. Drawing on evidence from university leaver surveys, it has been found that graduates who had earlier been educated at private schools are more likely to attain high-status occupations, and to gain higher wages, than otherwise similar state-educated university graduates (Crawford and Vignoles, 2014; Macmillan et al., 2015; Crawford et al. 2016). Yet, while informative, these studies reveal only the direct or residual premium discussed above – not the *overall* outcomes of private schooling. The greater part of the overall premium is likely to derive from the increased chances of accessing universities, especially the high-status 'Russell Group' universities, which is in turn dependent on achieving highly in public exams (Jerrim et al. (2016). Our estimates of labour market outcomes below go beyond these studies to estimate for the first time the *overall* wage premium and occupational outcomes for those at school since 2000, by which time the schools were already being substantially transformed with major investments in facilities and class-size reductions.

Outcomes could also be expected from the broader range of activities supported by the resource-rich private schools of modern Britain. In the current policy environment that stresses 'public benefit' requirements, the schools have proposed that they fulfil this obligation partly through bursaries for low income families and partnerships with state schools, but partly also through inculcating a community-service orientation in their pupils. The annual censuses of the Independent Schools Commission duly report under their 'Public Benefit' heading the amounts that have been raised for charities, averaging at about £25 per pupil between 2016 and 2018,[3] and stress the large number of schools that organise volunteering activities. Similarly, schools often explicitly report such activities as 'public benefit' in their annual obligatory reports to the Charity Commission; such reports, as well as in-depth qualitative research with private school leaders, reveal their expectation that volunteering and charitable activities at school have long-term positive effects on the service orientation of their pupils beyond school (Wilde et al., 2016).[4]

In addition, therefore, to the private labour market rewards to be expected from a 21st century private education, there are claimed to be long-term external benefits, contributing to the social value of a private education. These putative external benefits are distinct from the external effects of educational attainment *per se*.

There are, however, no studies, to our knowledge, that have sought evidence for such claimed external benefits from Britain's private schools. While service to the community is a general aspiration, to test it we will focus on three particular activities commonly used to capture external benefits which are measured in our data, namely participation in local group meetings/voluntary organisations, doing unpaid voluntary work/ giving unpaid help, and charitable giving or fund-raising. Participation in group meetings and doing voluntary work are widely, though not universally, found to be positively related to education level, and to vary over the lifecourse and

according to individuals' time constraints; gender and ethnicity are also factors, whose effects differ across countries (Rotolo and Wilson, 2007; Gibson, 2001; Osborne et al., 2008; Tang, 2008; see Wilson, 2000, for an overview). Volunteering also tends to be positively influenced by parents' volunteering activities during childhood (Perks and Konecny, 2015). Opportunities for volunteering in adolescence, and extracurricular activities are linked to later volunteering even if these are mandated (Barber et al., 2013; Janoski et al., 1998; Clerkin et al., 2009), though some compulsory volunteer-type programmes are found in other studies to be ineffective or even to have negative effects (Helms, 2013; Warburton and Smith, 2003; Yang, 2017). Clerkin et al., (2009) find a similar set of factors – family background, sex, religiosity, political identity and high school volunteering experiences – to be associated with US students' charitable activities.

Few studies investigate differences among school types in promoting post-school external benefits. An exception is Dee (2005), who reports that students who had attended US Catholic schools are more likely to vote, but do not volunteer more often than those educated at public (i.e. state) schools. In contrast, Hill and den Dulk (2013) found substantial differences in volunteering by school type in the United States, with those educated at Protestant secondary schools being more likely, and those at non-religious private schools less likely, to volunteer later in life.

Accordingly, we ask the following research questions, comparing young adults educated at England's private schools in the 21st century with those from observably similar backgrounds educated at state schools:

1. To what extent is private schooling associated with high-status occupational attainment, with upward mobility from lower occupational classes, and with the avoidance of downward mobility from families in upper occupational classes?

2. What is the wage premium for employees educated at private school?
3. How much, if at all, is private schooling associated with external benefits for society, specifically: participation in local groups, unpaid volunteering, and charitable giving?

3. Data and Measures

Next Steps

The 'Next Steps' data followed a cohort born in England in 1989/1990 through seven annual waves from 2004 (aged 13/14) to 2010 (aged 19/20), and again through an eighth wave in 2015 (aged 25) (see https://cls.ucl.ac.uk/cls-studies/next-steps). The cohort is linked with the National Pupil Database (NPD) which provides attainment data. Schools were the primary sampling units, then children within schools. Respondents were selected to be representative of young people using a stratified random sample, with disproportionate sampling for deprived schools and for pupils from ethnic minorities. After an initial response rate of 98 percent at wave 1 (n=15,770) subsequent attrition and some re-joining in later waves resulted in a 48 percent response rate at wave 8. At each wave, data managers computed non-response weights from a predictive model based on a rich set of demographic, family background, and interview characteristic variables.

Measures

In this paper we use data from waves 1 to 4, and 8. For our key independent variable we use a dummy variable for attending private schooling at age 13; this indicator comes directly from the school-type identified through the initial sampling process at Wave 1, and therefore can be expected to be highly reliable. Given the two-stage sampling design, with deliberate oversampling, all descriptives and models are adjusted using the appropriate sampling and non-response weights;

and standard errors are calculated using these weights taking into account school-level clustering.[5] This procedure only partially addresses the potential problem of non-response/attrition bias, common to most surveys, which may occur if variables of interest are correlated with the probability of non-response/attrition. The proportion privately educated in the wave 13 sample is 7.35 percent, compared with 6.93 percent for those at work in the age 25 sample with non-missing observations on pay and 6.48 percent for those with non-missing observations on occupation.

To measure labour market rewards we use two outcome variables – occupational attainment and weekly pay. 'High-status occupational attainment' is indicated by employment in either of the top two NS-SEC classes: 'Higher Managerial and Professional', or 'Lower Managerial and Professional'. 'Upward mobility' is defined as attaining one of these top two groups by anyone whose parents were not in the top two groups; 'downward mobility' is defined, for those whose parents *were* in these top groups, as *not* attaining a high-status occupation by age 25. The analysis of occupational attainment is applied to all those whose main activity is in the labour force at age 25, including the self-employed and the unemployed, excluding those whose main activity is education but who also work some of the time (1 percent of the labour force). It is recognised that mobility to higher occupations can occur at later ages, and that 25 is likely to be too soon to capture the peak occupational attainment of some. For the analysis of pay, we study only those whose main activity was being an employee. There were a small number of extreme outliers on pay, which could in principle be either genuine outliers or errors. We removed 68 observations where the pay was either more than five times above, or less than one fifth of the predicted pay; for this purpose predicted pay is computed from a regression of log pay on highest qualification, weekly work hours and social background variables (parents' social class, gender, ethnicity, region).

Three items measure age 25 outcomes that are conventionally classed as external benefits. For

Voluntary Group Participation (henceforth Participation), Volunteering and Charitable Giving, respondents are asked, respectively, how often they: 'attend meetings for local groups/ voluntary organisations'; '(do) unpaid voluntary work, give unpaid help to other people e.g. a friend, neighbour, or someone else (but not a relative); 'give money to a charity /take part in a fundraising event'. To capture regular external outcomes, for each activity we coded a dummy variable to be 1 if the activity took place at least once a month, zero otherwise.

As indicators of socio-economic background we include measures of parental social class, log of permanent family income, parents' highest education level, region, whether home owner, area deprivation score, gender, ethnicity (9 dummies), and an index of home disruption up to age 13 (a standardised average of items capturing potential disadvantage in childhood human capital accumulation). For details on the construction of these controls, and their descriptive statistics see the online Appendix.

4. Findings.

Descriptions of Private and External Outcomes and of Social Mobility

Table 1 shows that there is a substantial (35 percent) raw average employee pay premium at age 25 for those educated privately, compared with those educated in the state sector; the median pay premium is somewhat higher, at 43 percent. In parallel with this pay gap is the private schools' 29 percentage point lead in the proportion of the labour force who were in a high-status occupation. In respect of charitable giving. there is also an 11 percentage point lead for the privately educated in the proportion of adults at age 25 who give to charities or attend fund-raising events at least

once a month. By contrast, for our other indicators of external benefit there is no statistically significant private/state gap.

[Table 1 about here] See end.

Table 2 examines occupational class attainment in more detail, splitting the sample according to whether the respondents' parents were in a high-status occupational class. Thereby, the table presents a picture of the extent of social mobility. Unsurprisingly, occupational class of origin is strongly associated with the sons' and daughters' occupational attainment. Of those whose parents were in a high-status occupation, 51 percent were in a high-status occupation at age 25; whereas among those brought up by parents who were not in a high-status occupation, only 32 percent had gained high-status.

The table also shows how private schooling is a channel through which upward or downward mobility occurs. Among those with parents not in high-status occupations, attainment of a high-status occupation by age 25 is much lower for those educated in a state school (31 percent), than for those privately educated (66 percent). Among the children of parents in high-status occupations, 48 percent of those who were state educated have reached a high-status occupation by age 25, as compared with two thirds (68 percent) of those educated in private schools.

[Table 2 about here]

Analyses.

In a small number of studies, analysts have derived estimates of private school effects on low-income pupils from lottery schemes that allocate state-subsidised places (Dynarski, 2016): though lotteries do not always generate a truly random assignment, such quasi-experimental studies arguably produce the best estimates of causal effects. But in the large majority of situations the

most common strategy is a single-equation multivariate model (or occasionally a structural equation system, or propensity score matching methods), using the best available set of prior control or matching variables. None of these studies have found credible instruments for private school attendance; they therefore estimate the conditional association of private schooling with outcomes of interest, and do not prove causation. We follow this same single-equation strategy here.

To study the association between private schooling and these outcomes, we estimate three models for every outcome. Model 1 is the raw association between the outcome and private schooling. In model 2 we introduce all the prior controls, covering both family and individual characteristics up to and including age 13. The coefficient on private schooling in this model is our best estimate of the association with the outcome for observably similar individuals who differ only by way of their school type. In model 3 we add the individual's educational attainments by age 25. The extent to which the coefficient on private schooling in this model changes from that of model 2 gives a simple measure of how far, if at all, private schooling's outcomes are mediated by educational attainment.

Table 3 presents the associations between private school attendance and key labour market outcomes. The first panel shows, for those in the labour force at age 25, the average marginal effects of private school attendance on the probability of being in a high-status occupation; these are computed from the estimates of a probit model. Model (1) confirms the descriptive picture from Table 1, indicating a 27.9 percentage point private/state gap in the attainment of a high-status occupation. Model (2) shows that, after controlling for socio-economic background with our rich array of indicators, our best estimate of the private school advantage for observably similar people is 12.0 percentage points. Model 3 shows that, while much of this advantage is mediated by

educational attainment, there remains a direct effect on high-status occupational attainment of 5.5 points from being at a private school.

Model (2) in the second panel shows a positive coefficient but this is imprecisely measured and the coefficient is not statistically different from zero: thus we cannot reject the null hypothesis that private schooling is not associated with upward social mobility. By contrast, in panel 3 the model 2 coefficient shows that private schooling *is* significantly associated with reducing downward mobility, for those whose parents are in a high occupational class, by 11.6 points. Model (3) in the third panel also indicates that this association with lower downward mobility remains significant even after controlling for highest educational achievement, suggesting that there is a direct association between private school attendance and avoiding downward mobility.

The fourth panel shows the private school pay premium. In model 1 is the raw gap: 35 log points (that is, 41 percent of pay). After controlling for all observable social background factors, the premium is estimated to be 16 log points (17 percent of pay). Strikingly, there remains a 10 percent pay premium even after controlling for subsequent educational achievement.

[Table 3 about here]

Three additional tests were carried out. First, we tested whether there was a gender difference in the estimated private/state gap in labour market rewards. In all models, we found that an interaction term between gender and private school attendance was statistically insignificant; we have therefore presented parsimonious specifications which assume that the effects are the same for males and females; this assumption can also be justified by studies which show that the different wage dynamics of males and females are manifested much more strongly in mid-career than at the early stage of 25. Second, we have re-examined occupational attainment with an alternative, more

exclusive, definition of high-status occupation – just the top NS-SEC class (Managers and Professionals). Fewer (just 12 percent) have reached this status by age 25. This alternative assumption yields a similar pattern of findings, showing a strong association of private school attendance with high status attainment. Third, we have examined whether the private school premium is different for high-income families (defined as above the 90th income percentile). We included an interaction term between the dummy variables for high income family and private school attendance: its estimated coefficient was positive but statistically insignificant. Thus there is no clear evidence of a differential premium for those from high- income families. All these models are presented in the online appendix, alongside the full estimated models summarised in Table 3.

[Table 4 about here]

Table 4 summarises our findings of private school associations with external benefits. It shows that there are no statistically significant differences between state and private school alumni in the extent of their regular participation in local group or voluntary organisation meetings, either in the raw or after taking account of differences in social background (model (2)) or after controlling further for age 25 educational achievement, activity status and income (because these could affect the time and resources available for participatory activities). Similarly, with unpaid volunteering, there are no differences between those educated in the two school sectors, either before or after controls are added.

There is some evidence that those educated at private school are more likely to give to charities or attend fund-raising events regularly (at least once a month). Consistent with the descriptives in Table 1, the private/state gap is 11 percentage points; however, after controlling for demographics and socio-economic background (model (2)), the private-state sector difference is not significant.

With educational achievement positively related to charity giving (as full results show, see the online appendix), the private school effect remains insignificant after controlling further for the level of education achieved and age 25 activity status and income (model (3)). Estimates of the marginal effects of all other variables are available in the full model results in the online appendix.

5. Discussion.

These estimates show that earlier conclusions concerning those educated at Britain's private schools in the last century apply strongly to those educated in the much richer, modernised private schools of the 21st century; they also begin to broaden our understanding about outcomes of private schooling, beyond just the private labour market rewards. Compared with state-educated people with an observably similar socio-economic background, those attending private school in 2003 at age 13 had a 12 percentage point greater probability of being in a high-status occupational class at age 25; if they came from a high-status occupational class family, they also had a 12 percentage point lower chance of downward mobility. Overall, the private/state wage premium among employees at age 25 is 17 percent. This figure is not strictly comparable to findings from earlier studies, because it applies to an early career stage, and is the premium for private secondary schooling, unlike, for example, Green et al., (2011) which applies to attendance at private primary schooling and to outcomes in the early thirties. We do not therefore specifically answer the question as to whether the private school premium has increased since those schooled in the 1980s or before. Nevertheless, the 21st century premium is strikingly high for such an early stage in their careers.

Also germane is the finding that neither the private school wage premium, nor the associations

with occupational attainment and mobility, can be fully accounted for by the fact that private school alumni achieve higher qualification levels, and are more likely to gain entry to elite (Russell Group) universities. We find a direct premium of 5.5 percent at age 25 for private schooling independent of educational achievement, quite close to the 7 percent estimate derived by Crawford and Vignoles (2014) from a survey of graduates 3.5 years after graduating. It is conjectured that this advantage derives from social and cultural capital, even if the connection remains unproven. Nevertheless, our estimate of the *overall* private school premium is much greater, and the larger part of this premium stems from better access to university, especially a high-ranking one.

The null finding for external benefits stands in striking contrast with the labour market rewards. Our estimates do not bear out the expectations of private school leaders that some of their activities form a contribution to 'public benefit' in that they are inculcating in their pupils a particular orientation to serving communities. Our three measures are all indicators of potential external benefit to society, but we could find no positive association between private school attendance at 13 and these external benefits at age 25.

Of course, these social outcomes by no means cover all the possible wider effects of a resource-rich private education – other examples could be better health, or a lower propensity for criminal activity. Our measures, too, have limitations. Regular charitable giving, as a simple indicator of external benefit, should also be interpreted with care. The amount donated is not included in our data, and not all philanthropy is directed to the less well off. For example, a common practice among private schools (three quarters of which are themselves charities) is to solicit donations from alumni. Moreover, the external effects of a private education need not all be positive. Private education can, to some extent, be a positional good, in that access to high-status universities with limited capacities, and to a limited number of high-quality jobs with good career development

opportunities, is gained at the expense of those educated in state schools (Adnett and Davies, 2002). On the other hand, the quality education delivered by wealthy private schools may in itself bring positive external benefits, in so far as better education itself does so. There is further research to be done on these and other external outcomes, both positive and negative.

Additional limitations to this study include the fact that we have not been able to take account of the heterogeneity among private schools; to overcome this limitation would necessitate a larger sample and identification of schools so that they could be classified according to their resource base and reputation. One might conjecture that part of the positive impact of permanent family income on offspring's age 25 pay (which is documented in model (2) of the pay estimates shown in the appendix) could derive from the higher ranking (better resourced) private school which greater family income makes possible; if so, the private school effect would be greater than the estimate presented. Yet, while capturing private school heterogeneity might be expected to nuance some of our findings, it would be unlikely to alter substantially the pattern of the estimates of average marginal effects. A further limitation is that the estimates cannot be claimed to be causal estimates, since we have no means of separately identifying exogenous variation in private school choice. Our controls for social background and some prior child behaviours are quite extensive, but they do not pick up hidden parental motivations for choosing the private sector, motivations which might be correlated with the extent to which parents affect their children's aspirations for success.[6] Finally, our analysis of individuals' outcomes does not capture potential spill-overs from the resource-rich private school system on the problems of, and inequalities among, state schools; and hence it does not capture the full effects of the private sector on Britain's social mobility.

Despite these limitations, our study has been the first to demonstrate the *overall* labour market rewards associated with private school attendance at age 13 in the current century. The high early-

career labour market rewards should be set against the very high fees that families paid for the privilege of attending private schools in Britain. Even by 2003, the average private annual school fee was 40 percent of median family income (Green et al., 2018b). Any estimate of the long-term return for this cohort from the school fee investment would depend on assumptions about the expected lifecourse evolution beyond age 25 of the private/state pay premium. There is some evidence that, among graduates, the private/state wage gap increases in the three years immediately after graduation (Anders, 2015).

Given the continued exclusiveness of access, private schools appear from these findings to contribute still to the maintenance of low social mobility in the 21st century. It is appropriate, therefore, that private schools continue to figure strongly in policy discourse surrounding barriers to social mobility (Elliot Major and Machin, 2018; Green and Kynaston, 2019). Equally, the findings suggest that any policies to integrate some state school children in private schools would be likely to be successful – for those children – in raising them up the income ladder. The null findings on external benefits, by contrast, suggest that schools would do well to modify any claims to be delivering on their required 'public benefit' requirements by developing individuals who give service to communities.[7] It is possible that this approach to public benefit delivery could be effective in individual schools; but in that case an independent evaluation should be required by their Charity Commission regulators since, *on average*, the privately educated are just like others in this respect, neither more nor less minded to give up their time and money for the community.

Table 1 Private and External Benefits

	All (Average)	(sd)	State-educated (Average)	Privately-educated (Average)
Private Benefits				
Mean weekly pay (£)	412.0	404.3	401.1	557.2*
Median weekly pay (£)	384.6		369.5	530.5
Proportions who are:				
In high-status occupations	0.431	0.495	0.411	0.702*
External Benefits				
Proportions who:				
Attend local groups/vol. orgs^{++}	0.08	0.28	0.08	0.08
Do unpaid voluntary work^{++}	0.17	0.38	0.17	0.19
Give to charity/fundraise^{++}	0.27	0.45	0.27	0.38*

*Significant difference at 1% level between state and private. $^{++}$At least once a month.

Table 2 Social Mobility: Transitions between Low and High Occupational Status^{+} of Parents' Occupation and Cohort Member's Occupation at Age 25 (%)

	Daughters'/sons' occupation	
Parents' occupation.	Low	High
Low		
State	68.9	31.1
Private	33.5	66.5
All	68.1	31.9
High		
State	51.8	48.2
Private	32.0	68.0
All	49.3	50.7

$^{+}$ Low occupation status, based on NS-SEC coding, defined as: Intermediate occupations, small employers and own account workers, routine and manual occupations; never worked/unemployed, missing. High occupation status defined as: Higher managerial and professional, or lower managerial and professional.

Table 3 Association of private school attendance at age 13 with high-status occupational attainment, social mobility and pay at age 25.

	(1)	(2)	(3)
1. High-status occupational attainment			
n=6129	0.279**	0.120**	0.0552+
	(7.77)	(3.54)	(1.91)
2. Upward mobility			
n=3356	0.233*	0.0945	0.00794
	(2.22)	(1.10)	(0.12)
3. Downward mobility			
n=2773	- 0.200**	- 0.116**	- 0.0626+
	(5.65)	(3.33)	(1.77)
4. Log of Weekly Pay			
n=4814	0.346**	0.159**	0.0975+
	(6.06)	(2.83)	(1.84)

t statistics in parentheses; + $p < 0.10$, * $p < 0.05$, ** $p < 0.01$

Log of weekly pay in main job for employees. High-status occupational attainment is the probability of being in the top two groups (managerial and professional occupations). 'Upward mobility' defined as attaining top two groups by those whose parents were not in the top two groups; 'downward mobility' defined as *not* attaining top two groups for those whose parents were in the top groups. The reported estimates are average marginal effects, obtained, for pay, from OLS regression; for occupational attainment and mobility outcomes, by the probit estimator. Model 1 is the raw estimation with no controls. Model 2 controls are: parental social class, log of permanent family income, parents' highest education level, region, area deprivation score (IDACI), gender, ethnicity (9 dummies), index of home disruption up to age 13. Model 3 controls are: as for model 2, plus highest qualification level, and whether at 'elite' (defined as Russell Group) university.

Table 4 Association of private school attendance at age 13 with external benefits at age 25.

	(1)	(2)	(3)
Participation			
	0.00567	-0.0101	-0.0180
n=6925	(0.39)	(-0.78)	(-1.46)
Volunteering			
	0.0246	0.0288	0.0210
n=6922	(0.80)	(0.94)	(0.64)
Charitable giving			
	0.115**	0.0504	0.0327
n=6917	(3.13)	(1.57)	(0.99)

t statistics in parentheses; $^{+}$ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$

For Participation, Volunteering and Charitable Giving, each activity is coded to be 1 if the activity took place at least once a month, zero otherwise. All estimates are probit coefficients. Model 1 is the raw estimation with no controls. Model 2 controls are: parental social class, log of permanent family equivalised income, parents' highest education level, region, area deprivation score, gender, ethnicity, index of home disruption up to age 13. Model 3 controls are: as for model 2, plus age 25 activity status (13 category dummies), highest qualification level, and whether at 'elite' (defined as Russell Group) university; for charitable giving we also include a crude age 25 weekly income proxy, computed as weekly pay for employees, average weekly employee pay for the self-employed, and zero for all others.

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Endnotes

[1] By 'private schools' we specifically mean fee-paying schools; these are also commonly referred to in Britain as 'independent schools'; while leading private schools have traditionally been referred to as 'public' schools at the secondary stage, and 'prep schools' at the primary stage.

[2] In Germany, for example, private schools have fewer resources than government schools (DESTATIS, 2016). In France, private schools are mainly Catholic schools with low fees. Even in the United States, where private school attendance is predominantly at religious schools, average tuition fees do not begin to match those in Britain except among the small minority (2.7 percent of 2015 school enrolment) in nonsectarian private schools (US Department of Education, Digest of Education Statistics, 2015).

[3] Computed from figures provided in the *ISC Censuses*, for 2016, 2017 and 2018.

[4] Frensham School, to take an example, in its trustees report to the Charity Commission for the year ended July 31, 2015) claims under the 'public benefit' heading that it: 'provides education in the widest sense covering academic subjects, a wide range of extra-curricular activities, and community responsibility.' For the same year, another school (Wycliffe) states of its extra-curricular activities: 'These are intended to provide an environment in which each pupil can develop self-confidence and a desire to contribute to the wider community. Pupils leave Wycliffe with a social and environmental conscience and a commitment to make a positive impact on society and our environment.'

[5] The Next Steps study is managed by the Centre for Longitudinal Studies at UCL, and the data are downloadable from the UK Data Service. For full details of the survey see the Wave 8 User Guide obtainable from: http://www.cls.ioe.ac.uk/page.aspx?&sitesectionid=2383&sitesectiontitle=Surveys+and+documentation

[6] Prior ability might also be a factor. However, only one in two private schools are academically selective, and prior ability primarily affects which private school is chosen.

[7] No such implication can be drawn, however, from the evidence presented in this paper, concerning other forms of 'public benefit' by private schools.