

Social Policy in a Cold Climate

Summary

July 2015

New research evidence on social mobility and educational attainment

John Hills, based on research by Jo Blanden, Claire Crawford, Ellen Greaves, Paul Gregg, Lindsey Macmillan, Abigail McKnight, Luke Sibieta and Anna Vignoles

Coalition Deputy Prime Minister, Nick Clegg, argued that ‘the over-riding priority for our social policy is improving social mobility’. Research summarised here sheds light on how things have been changing as children move through education and on other key drivers of differences in life chances.

- General educational inequalities between those from different backgrounds declined for those born after 1980. However, when focussing on the highest levels of attainment, gaps have persisted.
- There is clear evidence that initially high-attaining poorer children fall behind richer but lower-attaining children between 11 and 16. Much of this is attributable to differences between the types secondary schools attended by richer and poorer children, and some of it to differences in educational values, aspirations and expectations of pupils.
- Focussing on children with lower attainment at age 5 but coming from more privileged backgrounds suggests that there is a ‘glass floor’, protecting them from the downward social mobility that might have been predicted. Protective factors include higher parental education, higher maths attainment by age 10, enrolment in private or grammar secondary schools, and reaching university.
- Disadvantaged children now do better in London than elsewhere. Improvements started in the mid-1990s, with higher standards at entry to secondary school an important driver of later results. Some of the ‘London effect’ reflects ethnicity and other differences with the rest of the country, but these do not account for the change over time, particularly for higher level qualifications. The progress of London’s ethnic minorities through primary schools is particularly striking.

Introduction

The Coalition Government's Deputy Prime Minister, Nick Clegg, said in 2011, launching the government's social mobility strategy, that, 'the over-riding priority for our social policy is improving social mobility'. Social mobility is generally measured by looking at how strong the links are between outcomes – in terms of incomes, occupations, or education – for one generation when it reaches adulthood and those of their parents. But it will take several decades before we can really tell whether many of those links between generations have become stronger or weaker in recent years, under the Labour governments before 2010, let alone the Coalition government that left office in 2015.

We can, however, begin to look at evidence on how one crucial set of links – those between educational attainment and parental background – have been changing, and at factors that mediate the relationships between educational attainment and later outcomes in terms of income and occupational social class. This summary introduces findings from four research studies carried out as part of (or closely associated with) CASE's 'Social Policy in a Cold Climate' programme. These are:

- Jo Blanden and Lindsey Macmillan's study, *Education and intergenerational mobility: Help or hindrance*;
- Claire Crawford, Lindsey Macmillan and Anna Vignoles's study, *When and why do initially high attaining poor children fall behind?*;
- Abigail McKnight's study (for the Social Mobility and Child Poverty Commission), *Downward mobility, opportunity hoarding and the 'Glass floor'*;
- Jo Blanden, Ellen Greaves, Paul Gregg, Lindsey Macmillan and Luke Sibieta's forthcoming study, *Understanding the improved performance of disadvantaged pupils in London*.

An exploratory detailed study of schools and pupils is also ongoing in the Social Policy in a Cold Climate programme. This examines the effects of recent school reforms on school sorting through a case study in Greater Manchester and will be published after the summer.

Education and intergenerational mobility

It takes a long time for data on the strength of the associations between people's economic situations in adulthood and those of their parents to become clear. It is only now, for instance, that can measure the association between the earnings in their late 30s (when it tends to be strongest) of children born in 1970 and family incomes when they were growing up. This association appears much stronger than the equivalent for those born in 1958. But it is forty years since the 1970 generation would have been affected by anything happening before school, and nearly thirty years since they would have been affected by what was happening in the schools they attended in the 1980s.

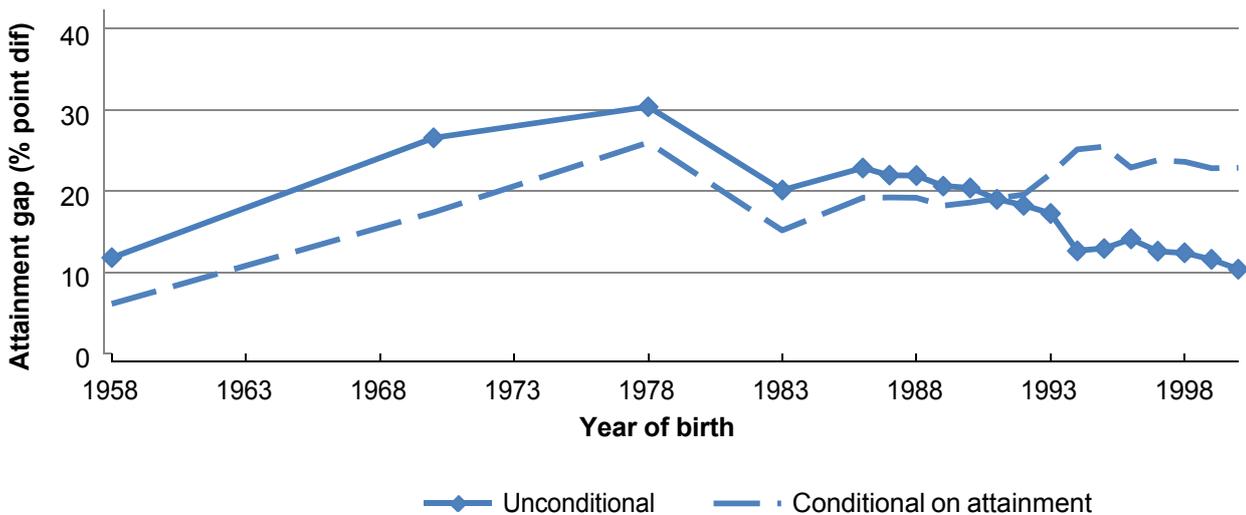
Jo Blanden and Lindsey Macmillan look, however, at what happened to more recent generations as they progressed through school and on to higher education (if they reach it). Differing levels of educational attainment as people enter the labour market are one of the key determinants of later occupations and earnings. They look at a comprehensive set of indicators of educational achievement, from school exam results to attendance at the highest status universities for those born between 1958 and 1991, to attainment in English and Maths at age 11 ('Key Stage 2') for those born between 1991 and 2000. They relate these outcomes to measures of family background, such as parental income when they were

growing up for the older groups or whether or not children were receiving free school meals (as an indicator of low income) while at school for the younger generations.

Figure 1 summarises their findings in a composite index of gaps in educational attainment between those with more and less affluent parents, taking account of 59 observations of various attainment gaps and family background measures at different times. The first finding – shown by the ‘unconditional’ solid line in the figure – is that these gaps widened between those born in 1958 and those born in the late 1970s. The advantages bestowed by more affluent parents grew over this period. However, for later generations the gaps have narrowed, and indeed the composite indicator for those born in 2000 was as low as back in the late 1950s.

However, much of the apparent narrowing in gaps after 1980 is associated with the *overall* upward trends in attainment and qualifications over time, which has allowed those with less privileged backgrounds to catch-up with others, many of whom were already reaching the thresholds used. The second, dashed, line shows that the gap allowing for the overall improvement (‘conditional on attainment’) has not narrowed for children born since the early 1980s.

Figure 1: Trends across time in attainment gaps (% point differences)



Note: For definitions of attainment gaps and sources of data, see Social Policy in a Cold Climate Working Paper 8.

This is confirmed when they look at higher levels of attainment beyond the standard thresholds, such as taking postgraduate degrees, achieving the highest A levels in the subjects most highly regarded by universities, or reaching the highest standards in English and Maths at age 11. In these measures percentage point gaps have often risen, or have fallen little.

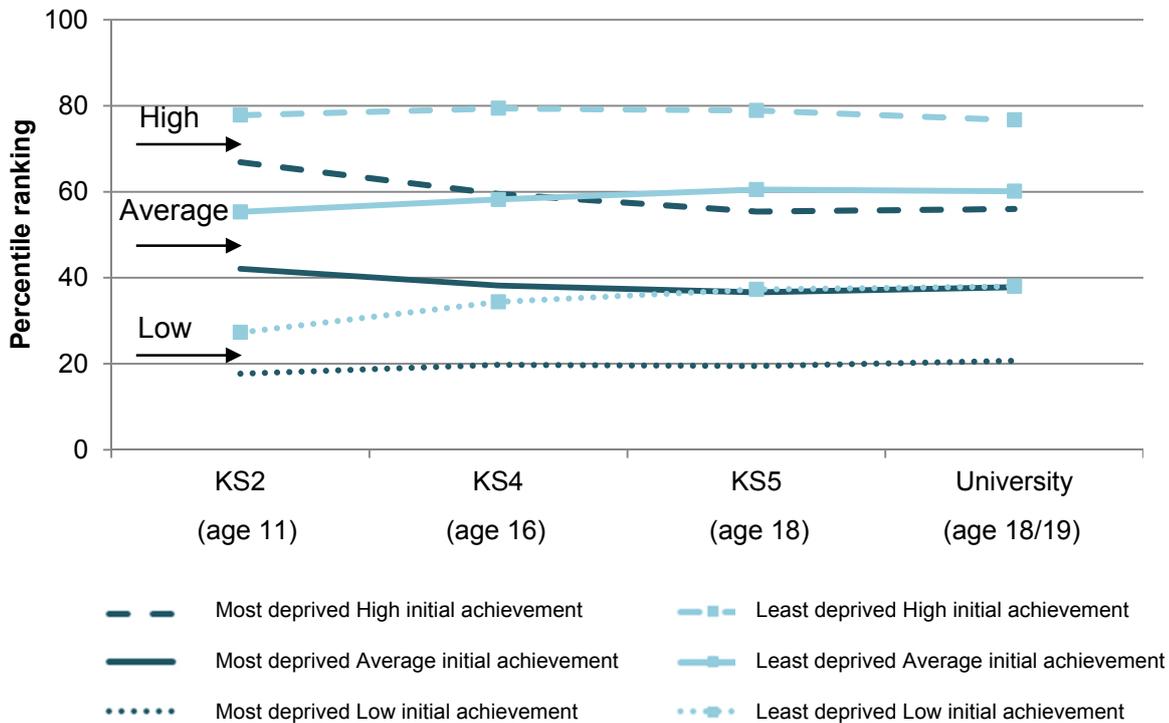
When and why do initially high attaining poorer children fall behind?

Previous research has suggested that children from less advantaged backgrounds who do well in cognitive assessments when they are 3 or 5 tend to fall behind children who did less well, but who came from advantaged backgrounds, as they get older. However, at least part of this pattern may be explained by the statistical phenomenon of ‘regression to the mean’, if these early observations are not a very good representation of a child’s underlying ability.

Claire Crawford, Lindsey Macmillan and Anna Vignoles use an approach designed to avoid these problems (using observed scores on a *different* measure from the one used to measure later progress). They also look at what happens through secondary school, a later age than studied in earlier research.

Figure 2 shows their results for children born between September 1989 and August 1990, comparing children from the most and least deprived fifths of an index of socio-economic background, tracking their progress from Key Stage 2 (age 11) through to university entrance (at age 18 or 19). It shows that, on average, initially high-achieving children from less deprived backgrounds maintain their advantage, while initially low-achieving children from more deprived backgrounds remain consistently low in the rankings. However, the less deprived children with ‘average’ performance at Key Stage 2 catch up with more deprived children with high initial attainment. Most of the changes shown occur at secondary school, between 11 and 16.

Figure 2: Trajectories from age 11 to university entrance for a cohort born in 1989/1990 by initial achievement for the most deprived and least deprived fifths of socioeconomic background



Notes: Initial achievement groups are defined using performance in maths at Key Stage 2. Average attainment is measured using performance in English at Key Stage 2; total point score in GCSEs and equivalent qualifications at Key Stage 4; total A-level point score at Key Stage 5; and ranking of university attended at age 18/19. Rankings at Key Stage 5 and university are predicted using performance at previous stages for those who do not participate at these levels.

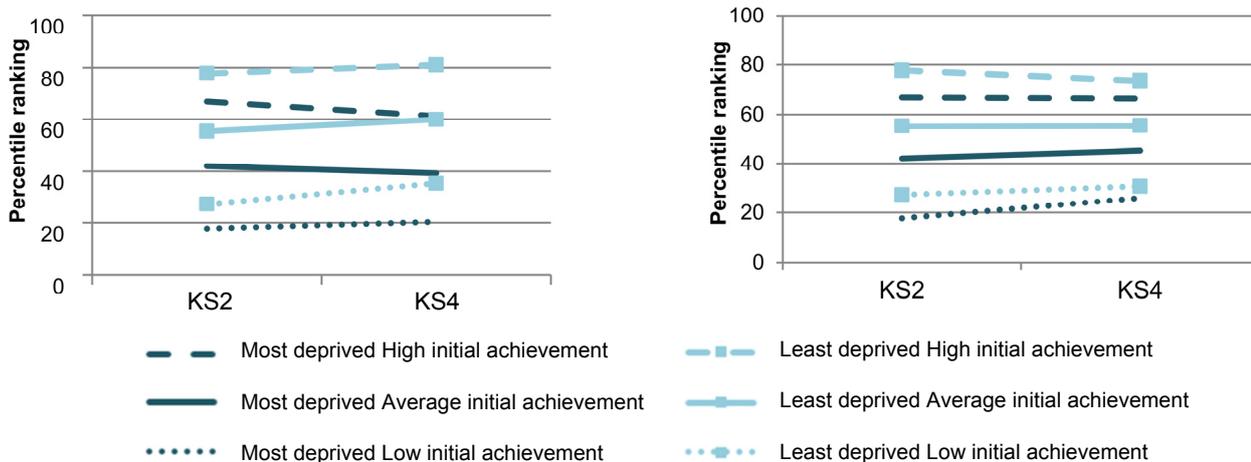
They then look at what might explain these patterns. The two panels of Figure 3 concentrate on changes between Key Stages 2 and 4. The first allows for demographic differences between the groups by initial attainment, including gender, ethnicity and month of birth. The pattern is much the same as shown in Figure 2 before controlling for these differences. But when pupils who attend the same schools are compared in the second panel, we no longer see initially high-achieving children from disadvantaged backgrounds falling behind initially average-attaining children from more advantaged backgrounds. This suggests (although does not definitively prove) that much of the pattern in Figure 2 results from sorting

and segregation of children from different backgrounds into different types of schools. The analysis further suggests that part of the remaining difference is associated with educational values, expectations and aspirations of pupils, although these may reflect levels of achievement as much as cause them.

Figure 3: Trajectories from Key Stage 2 to Key Stage 4 for a cohort born in 1989/1990 by initial achievement for the most deprived and least deprived fifths of socioeconomic background, conditional on demographics, and on school fixed effects.

Panel 1: Conditional on demographics only

Panel 2: Conditional on demographics and school fixed effects



Downward mobility, opportunity hoarding and the ‘glass floor’

Abigail McKnight uses data from the British Birth Cohort Study – covering children born in 1970 – to look in more detail at what seems to explain the way in which lower-attaining children from more privileged backgrounds tend not to end as far down the distribution of adult outcomes as might have been expected from the initial assessments. Is there a ‘glass floor’ that protects them from downward social mobility? Her analysis looks at both men and women and at both economic outcomes, such as hourly wages, and occupational social class by age 42.

She finds that children from more advantaged family backgrounds are more likely to have high earnings in later adult life and are more likely to be in a ‘top’ job. This is not simply due to different levels of cognitive ability, as it holds within groups across the distribution of attainment. Looking in particular at *low-attaining* children in cognitive skill tests taken at age 5 she finds:

- A social gradient in the likelihood that these children go on to achieve high earnings or employment in a top job.
- These gradients can mostly be accounted for by allowing for: later maths skills; childhood social and emotional skills (in particular, locus of control); type of secondary school attended; and whether or not they attain a degree qualification
- Parental education is also important, particularly whether or not parents have degree level qualifications.
- Secondary education at a private or a grammar school also increases the chance of success among this low attaining group of children.

The scale of these differences, and how they vary by gender, can be seen in Table 1. For instance, with otherwise similar characteristics only 13 per cent of initially low-attaining boys whose parents had no qualifications end up in the top fifth of earners at age 42, but 22 per cent of those whose parents had degrees; for girls the difference is between 5 and 10 per cent. More than twice as many boys who went to private schools, and three times as many girls who did so, end up as top earners as those who went to comprehensive schools, even if their other characteristics are the same.

Table 1: Predicted probability (%) of being in top fifth of hourly earnings at age 42 associated with key characteristics (estimated from full probit model at sample means)

		Initial low attainers		Initial high attainers	
		Male	Female	Male	Female
Family income	Lowest fifth	14	6	25	12
	Highest fifth	16	7	35	19
Parents' highest qualification	No quals	13	5	26	12
	Degree	22	10	29	14
Secondary school	Comprehensive	15	6	28	14
	Private	33	18	43	25
Highest qualification of child	No qualifications	12	5	19	9
	Degree	40	23	52	33

Figure 4: Predicted probability of being a top earner at age 42: four fictional pen portraits

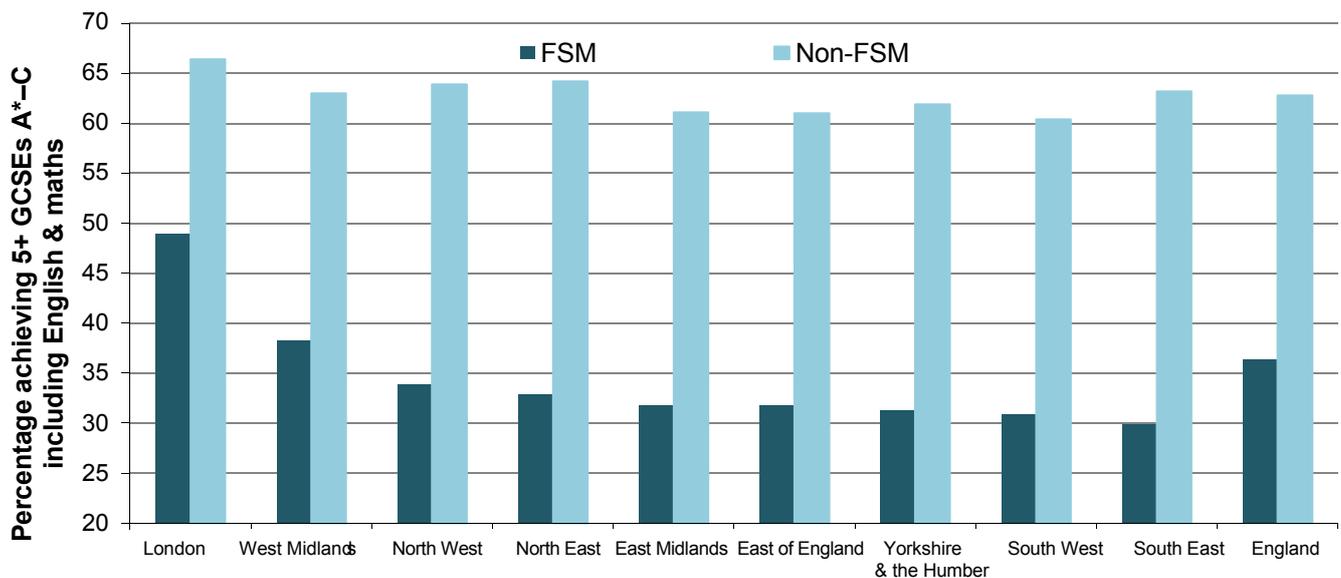


Figure 4 illustrates how different individual characteristics combine to produce dramatically different predicted probabilities of being a high earner at age 42. The following fictional pen-portraits describe four very different children who were all low attaining in the age 5 cognitive skill assessments. The model estimates are used to predict the probability that children with these characteristics will make it into the top earnings group at age 42. The probability of being in the top earnings group at age 42 ranges from 7% to 73% for these four fictional children and provides a useful reminder that different combinations of circumstance and characteristics can result in a range of outcomes.

Understanding the improved performance of disadvantaged pupils in London

As Jo Blanden, Ellen Greaves, Paul Gregg, Lindsey Macmillan and Luke Sibieta observe in their study, London is an educational success story, with especially good schooling results for more disadvantaged pupils. This is a dramatic reversal of fortunes since the 1980s. They use a combination of administrative and survey data to document educational improvements in London schools and in doing so begin to understand *why* disadvantaged pupils in London have been doing so well. As Figure 5 shows, nearly half of disadvantaged children in London (receiving free school meals) attained 5 or more GCSEs including English and Maths at grades A*-C in 2013, but only between 30 and 40 per cent in other regions.

Figure 5: Percentage of pupils achieving five or more GCSEs at A*-C including English and maths (or equivalent), by region, 2013



Source: Department for Education, GCSE and equivalent results in England.

The researchers show that:

- The performance of disadvantaged pupils in London in exams at 16 has improved substantially, starting from the mid-1990s.
- These improvements have been across a wide range of measures of performance, particularly for high-quality ones. This is linked to a greater likelihood of disadvantaged London pupils going on to post-compulsory education.
- The characteristics of disadvantaged pupils in London differ from those elsewhere, and in ways that matter for pupil attainment.
- Large improvements have happened in primary as well as secondary schools.

The 'London Effect' for disadvantaged children started in both primary and secondary schools in the mid-1990s, with higher standards at secondary school entry being an important driver of improved GCSE results in later years. Detailed analysis shows that being in a school with a high proportion of disadvantaged children no longer negatively affects children's outcomes. This is perhaps evidence of the spread of a 'no excuses' culture in London. Millennium Cohort Study survey data show that London's children's strong performance at age 11 is clearly related to the excellent progress that ethnic minorities make in primary school. Successful engagement with ethnic minorities is a substantial part of London's success.

As policies such as London Challenge, Excellence in Cities and Teach First started in the 2000s and until recently focused on secondary schools, they cannot explain the changes that started earlier, and affected primary pupils. Changes that could relate to the improvements include the promotion of school competition in the period, with more schools to choose from than elsewhere; more effective parental choice; and the 'literacy hour', which was piloted fastest in London primary schools. The researchers argue that closer examination of policies and practice in London could provide valuable lessons for how educational inequalities can be overcome and social mobility maximised.

Further information

Readers wanting further details are advised to go to the individual papers available at:

Blanden, J. and Macmillan, L. (2013) *Education and intergenerational mobility: Help or hindrance* <http://sticerd.lse.ac.uk/dps/case/spcc/wp08.pdf>

Crawford, C, Macmillan, L and Vignoles, A. (2015) *When and why do initially high attaining poor children fall behind?* Available at: <http://sticerd.lse.ac.uk/dps/case/spcc/wp20.pdf>

McKnight, A. (2015) *Downward mobility, opportunity hoarding and the 'Glass floor'* available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/447575/Downward_mobility_opportunity_hoarding_and_the_glass_floor.pdf

Blanden, J., Greaves, E., Gregg, P., Macmillan, L. and Sibieta, L. (2015) *Understanding the improved performance of disadvantaged pupils in London*. Available from October 2015 at: <http://sticerd.lse.ac.uk/dps/case/spcc/wp21.pdf>

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