

# SOCIAL MOBILITY IN THE UK: IS IT WORSE THAN WE THINK?



Academic research showing that intergenerational socio-economic mobility has declined among those leaving schools in the late 1980s has placed social mobility as a key social policy issue in academic, media and political discourse over the last decade. However the research is still in its infancy and is hampered by the practical problems associated with gathering vast amounts of data over a lifetime to gain a truly accurate picture. New research by **Paul Gregg**, **Lindsey Macmillan** and **Claudia Vittori** asks whether the persistence of inequality across generations is actually understated and explores the biases in the current methodology to move towards a more complete picture of mobility patterns.

### **Birth cohort studies**

To fully understand social mobility, researchers would have to observe family income throughout childhood and then observe all earnings attained in adulthood for the same person. This is very data intensive and requires a huge time window as one would have to wait until people reached age 65 to complete the picture. So previous work has often measured family income once in late childhood and earnings at a point in time, typically when a person has reached their 30s in the UK. We know from international studies that these point-in-time based estimates have biases that lead to an understating of the persistence of inequality across generations.

Fortunately the UK has a number of birth cohort studies where children born within a small time window are followed for the rest of their lives. These are very valuable for exploring intergenerational mobility as they hold detailed information on a large sample of families over a long period of time. The children from the first two studies, the 1958 National Child Development Survey (NCDS) and 1970 British Cohort Study (BCS), are now well into adulthood. These data allows us to track the experience of children through to ages 50 and 38 in the NCDS and BCS respectively and draw a fuller picture of lifetime earnings by family background.

Earnings measures are available at ages 23, 33, 42, 46 and 50 in the NCDS and ages 26, 30, 34 and 38 in the BCS. Retrospective employment histories are also available

between sweeps of the survey from age 16 up to 50 in the NCDS and 38 in the BCS. Family income measures are available at age 16 in the NCDS and 10 and 16 in the BCS. As is standard in studies of intergenerational income mobility we focus here on male cohort members to avoid issues of selection into work.

### **Intergenerational persistence across the lifecycle**

Work by Haider and Solon (2006) and Grawe (2006) has drawn attention to the issue of life-cycle bias. This emerges because individuals' earnings trajectories are not the same across the life-cycle for all people and more specifically vary by education level achieved and family background. People's earnings tend to rise through their 20s as they gain experience and move into more senior positions. For those with less education this process stalls in their early 30s but for those with more education, this earnings growth continues well into their 40s. These differential growth rates in earnings by background mean that the window in which we view the snapshot of data for each generation may not be representative of lifetime incomes.

US studies have shown that the result is a downward biased assessment of persistence in inequalities across generations (intergenerational elasticities) when measurement occurs early in people's working lives until their early 40s. It is not certain though that the extent of this bias is

the same across countries or across time within a country. The main UK studies on intergenerational economic mobility to date have compared mobility across these cohort studies at relatively young, although similar ages, when the cohort members are in their early 30s.

Figure 1 updates this evidence presenting new estimates of intergenerational persistence at later age: age 42, 46 and 50 in the NCDS and age 34 and 38 in the BCS. As can be seen from the figure, this overestimating of mobility (and therefore underestimating of inequality persistence) can be observed in the measures, from age 33 for NCDS and age 30 for BCS, used in previous studies: the intergenerational elasticity continues to rise in the NCDS until age 42 and is increasing up to age 38 in the BCS. This effect is similar for both of the cohort studies, meaning that the central finding of declining mobility is unchanged. In the NCDS at age 42, the estimated intergenerational persistence in inequality is 0.290 and in the BCS by age 38 this is 0.385. That indicates that 29 per cent of income inequality between rich and poor parents in the first cohort who left school in mid-1970s is still there when their children are adults. For children leaving school in the late 1980s the income inequality between rich and poor has risen to 38.5 per cent.

**Estimating lifetime earnings**

Using the information from all ages we can start to explore measures for lifetime earnings. We use information on cohort member’s earnings at various ages to plot a linear trajectory of their monthly earnings

Between 1970s and 1980s income inequality between rich and poor increased from 29% to 38.5%.

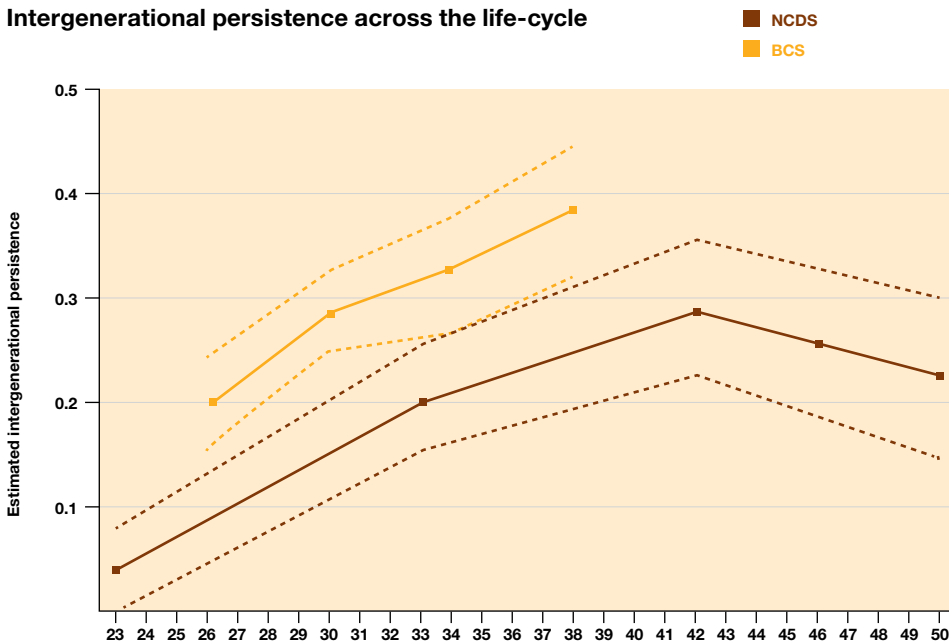
over the lifecycle. Taking an average of all months across the period (ages 23-50 NCDS and 26-38 BCS) we, thus, move towards a measure of average monthly lifetime earnings. Of course neither cohort has yet to reach retirement age and so these measures are capturing one half to two thirds of lifetime earnings currently. We also consider a comparable period in the NCDS of 26-38 to compare with the BCS cohort. This exercise highlights another issue that to date has generally been ignored: people are not always in work and those who are not working come disproportionately from poorer families.

To consider this issue, our sample is built in three stages using the information from records of employment histories: first, we look at only people who are always employed. Second, we add in people who have experienced limited spells out of work (less than two years) over the entire window. Finally, we add in people who rarely report earnings because they are out of work for longer periods of time (more than two years).

Figure 2 shows that in the NCDS, the intergenerational elasticity from age 23-50

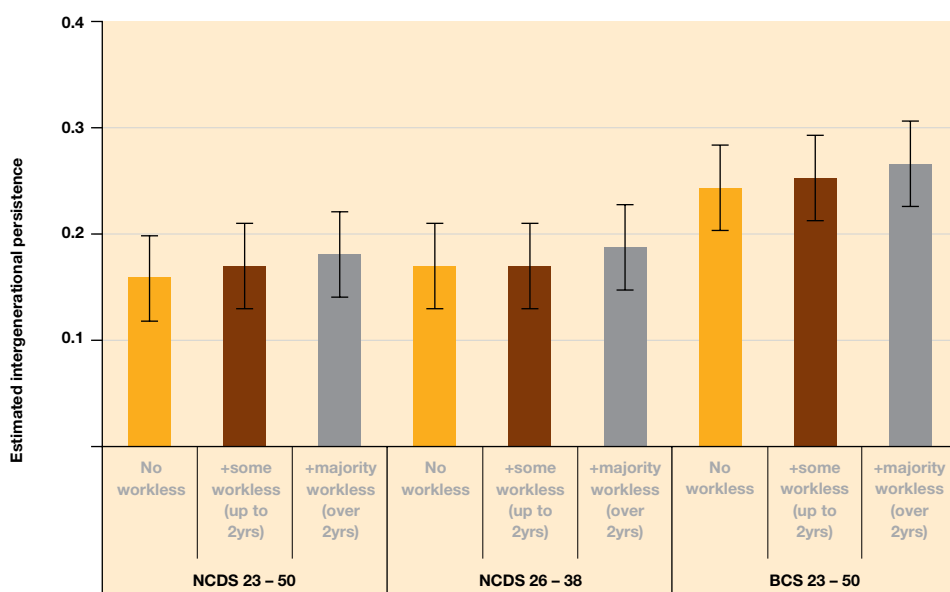


**Figure 1**  
Intergenerational persistence across the life-cycle



The estimated intergenerational elasticity shows the association between parental income in childhood and later earnings of sons at various ages across adulthood. The dotted lines show the 95 per cent confidence intervals around these estimates.

**Figure 2**  
Average lifetime intergenerational persistence



Intergenerational persistence across the life-cycle is substantially higher than previous estimates found.

is 16 per cent for those who are always in employment and increases to 18 per cent as we add in people with periods of worklessness. If we focus on a comparable window from age 26-38 in the NCDS the results are similar with the intergenerational elasticity ranging from 17 per cent for those who are always employed to 19 per cent including those who experience spells out of work. In the 1970 Birth Cohort Study, the average lifetime elasticity from age 26-38 is 24 per cent if we focus on those who are always in work and rises to 26 per cent when including those who experience a lot of workless spells. The main point here is that inclusion of those who are often missed in point-in-time studies tends to understate inequality persistence, even before considering the effect of not working on lifetime earnings.

**Including spells out of work**

This average measure of lifetime earnings still does not tell us the complete picture. It fails to account for the fact that there are individuals in columns two and three of

Figure 2 (some / majority workless) who experience spells where they earn nothing. These workless spells are not random in terms of family background: those who are always employed came from families with an average family income of £351.10 a week in the BCS compared to those who are out of work for over two years who came from families with an average family income of £273.50 a week. Using the monthly work histories available in the cohort studies we can observe these months where the cohort members will have zero earnings and include this in our average lifetime earnings measure.

There are also an additional group of people that need to be considered when we start to think about including periods out of work: those cohort members who never report earnings and genuinely have a very low lifetime earnings because they are rarely in work. They are also from the poorest families with an average family income at age 16 in the BCS of £245.20 a week.

Figure 3 plots the estimated intergenerational elasticity using lifetime earnings as the outcome including periods of worklessness where the cohort members earn nothing. In addition to building up the sample as in Figure 2, we also include a fourth column where those with no earnings because they rarely work are included. The addition of periods of zero earnings substantially increases the scale of inequality in the cohort members' earnings (standard deviation increases from 0.5 to 1.4 in the BCS). As can be seen from the figure, this substantially increases the estimated



intergenerational elasticity in the BCS from around 25 per cent to 48 per cent when considering the full sample including those with no reported earnings.

Of course, those who experience spells out of work are often entitled to some benefits as compensation in the UK. If we assume that spells out of work are compensated at an average earnings replacement rate (around £325-350 a month as reported in this data) then we still see a marked increase in our estimates of intergenerational persistence, although not as striking as for zero earnings. For the full sample, the estimated elasticity is 21 to 23 per cent for those in the NCDS and 30 per cent in the BCS. Note that these estimates will understate true lifetime inequalities as gaps are smaller when people are younger compared to when they are prime working age. Also the studies do not yet capture the decline in working as people move toward 65 as health issues limit employment and some people start to retire.

**Conclusions**

Previous estimates of intergenerational mobility have focused on earnings of sons at a point in time, often fairly early in the life-cycle when returns to education have not yet been fully realised in the labour market. We document that income inequality rises as expected up to age 42 in the earlier NCDS cohort (born in 1958) and is continuing to rise at the latest observed age of 38 in the more recent BCS (born in 1970). By introducing a new

concept of lifetime earnings we start to build a picture of persistence in inequalities across the whole of life in the UK. We show that intergenerational persistence can be measured across a range of ages and in doing this we can start to account for spells out of work that are not randomly experienced by family background. When this real inequality in earnings is accounted for our estimates of intergenerational persistence across the life-cycle are substantially higher than previous estimates, indicating that the mobility problem may be significantly worse than we had previously thought in the UK.



This article is based on a paper presented by Paul Gregg at the conference 'Intergenerational mobility and social gradients in children's life chances' on 20 November 2013. The conference was hosted by CMPO, the Institute of Policy Research at the University of Bath and the Child Poverty Social and Social Mobility Commission. Slides are available on the CMPO website: <http://www.bris.ac.uk/cmppo/events/2013/socialmobility/lifetime-intergenerational-economic-mobility-in-the-uk.pdf>

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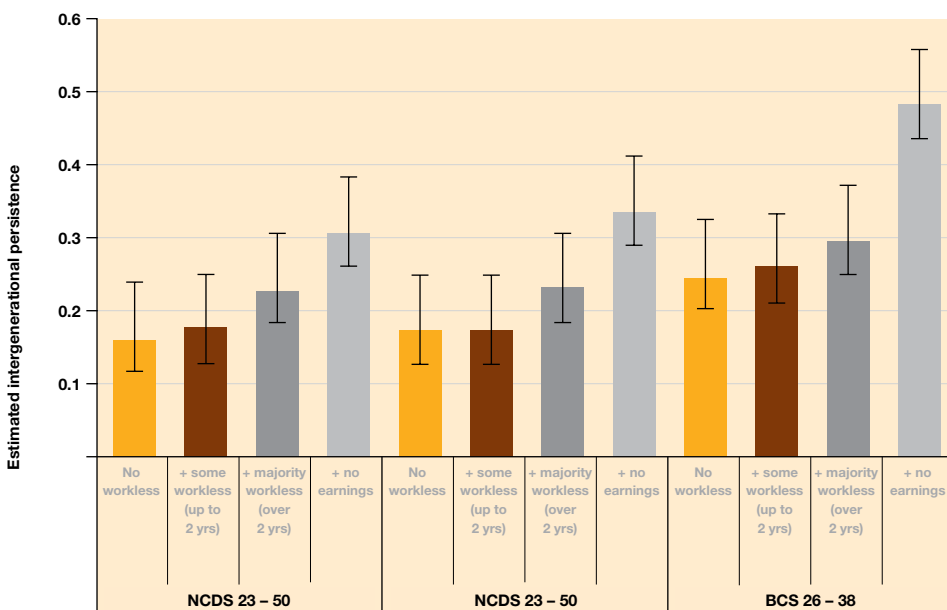
**Further reading**

Blanden, J, Goodman, A., Gregg, P. and Machin, S. (2004) 'Changes in intergenerational mobility in Britain', in M. Corak, ed. *Generational Income Mobility in North America and Europe*, Cambridge: Cambridge University Press.

Ermisch, J. and Nicoletti, C. (2005) 'Intergenerational earnings mobility: changes across cohorts in Britain', ISER Working Paper 2005-19. Colchester, University of Essex.

Corak, M (2013) "Income inequality, equality of opportunity and intergenerational mobility" in *The Journal of Economic Perspectives* Vol. 27(3). pp. 79-102.

**Figure 3**  
Average lifetime intergenerational persistence including zero earnings for spells out of work



Including individuals who experience periods of worklessness increases this estimate further.