

# CSI 11: Is Class Inequality at KS4 decreasing?

## Summary

- Social class inequalities in GCSE performance at Key Stage 4 are large and have decreased only slightly since 2001.
- There is some evidence that the gender gap in performance – which favours girls – is accentuated by social class. However this does not seem to be a matter of working-class boys doing exceptionally badly, rather there is a general class gradient.
- White working-class boys perform less well than working-class boys from ethnic minority homes. The same pattern is observed among girls. It is possible that this is because some ethnic minority parents have educational resources they have been unable to use in the British labour market but which are of value to their children as they negotiate the school system.

## Introduction

Success in school examinations is a key driver of children's future life-chances. We expect schools to have a significant impact on children's learning. But children are also influenced by the lottery of life. They do not choose the family into which they are born and we know that family background has an important impact on educational outcomes. Family background is a complicated and multi-faceted thing and in this report we look at just one key aspect of it: family social class. We examine the magnitude of its impact on examination outcomes at Key Stage 4, the end of lower secondary school: Heterogeneity in KS4 performance associated with social class we regard as a *prima facie* indicator of social class inequality. We are also interested in whether over the period for which we have good quality micro data, which is 2001-2013, there is any evidence of a reduction in the extent of class inequality.

It is sometimes said that there is a particular problem with the KS4 performance of working-class boys. Occasionally a more specific claim is made that white working-class boys are particularly disadvantaged. We present evidence that addresses these claims.

## Measurement Issues

In this report the indicator of achievement at KS4 is attaining 5+ GCSEs at grade C and above or the equivalent. This is a less exacting indicator than that favoured by the Department for Education which includes passes in Maths and English; however it is the only indicator for which there is a consistent time-series of individual level data. Because it measures a less exacting standard we would expect it to understate social class inequality.

Social class is indicated by the NSSEC category of the head of the family or household of which the respondent is a member. NSSEC is based on occupation. The 'head' of the family is not necessarily the respondent's father. Who it is, and thus the measured social class of the family, depends upon rules regarding the rank order of NSSEC categories and whether their employment is full-time or part-time.

The data pertain to individuals aged 17 and 18 in the 2001-2013 October-December quarter of the Labour Force Survey (LFS) who were living in England, Wales or Northern Ireland at the time of the survey and were resident in the family home or in a college hall of residence (N=31,322). On average 3.4% of 17 year olds and 8.9% of 18 year olds were not recorded as resident in the family home and are excluded from the analysis. Scottish residents are excluded because Scotland has a different examination system.

Class inequality is described most frequently in terms of *relative risk*; instead of this conventional term we will call it the *disparity ratio* (DR). The disparity ratio is the percentage from a particular class background crossing the threshold divided by a reference percentage, for instance the estimated percentage of the total 17-18 age group that between 2001 and 2013 reached or exceeded the target level (which was 65%). The disparity ratio should be interpreted as follows: a value of 1 means that children from the class under consideration achieved the reference level; 1.4 that they exceeded it by 40%; 0.7 that they fell short by  $(1-0.7) \times 100=30\%$ .

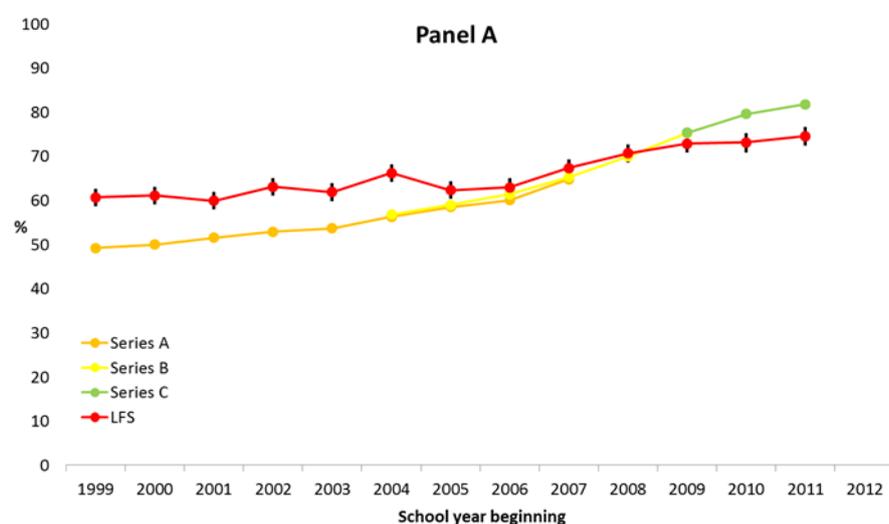
Because our evidence comes from sample surveys the numbers we present are subject to sampling error. To display to best effect the patterns revealed by the data we smooth our estimates by basing them on a well-fitting statistical model.

## What do the official statistics say?

The percentage of children obtaining 5+ GCSEs at grade C or above has increased steadily with a hint of accelerated growth after 2006. The official series is not consistent and there are major breaks and also changes in the definition of what counts as a success at GCSE. The LFS series has a flatter slope than the official series (see Figure 1 Panel A). The definition of GCSE success is consistent but the population sampled in the LFS is not the same as the population of 16 year olds taking examinations in English schools. While the official data has reliable measures of exam performance the only individual level data available from official sources about social disadvantage is whether or not a pupil claimed free school meals.

### Figure 1: GCSE performance has improved and the disadvantage of Free School Meals pupils has fallen

Panel A: Percentage of 16 year olds in English schools with 5+ GCSEs at grade C or above. Panel B: Same for those claiming and not claiming free school meals (FSM) and disparity ration (DR) between the two. Source: Department for Education estimates.

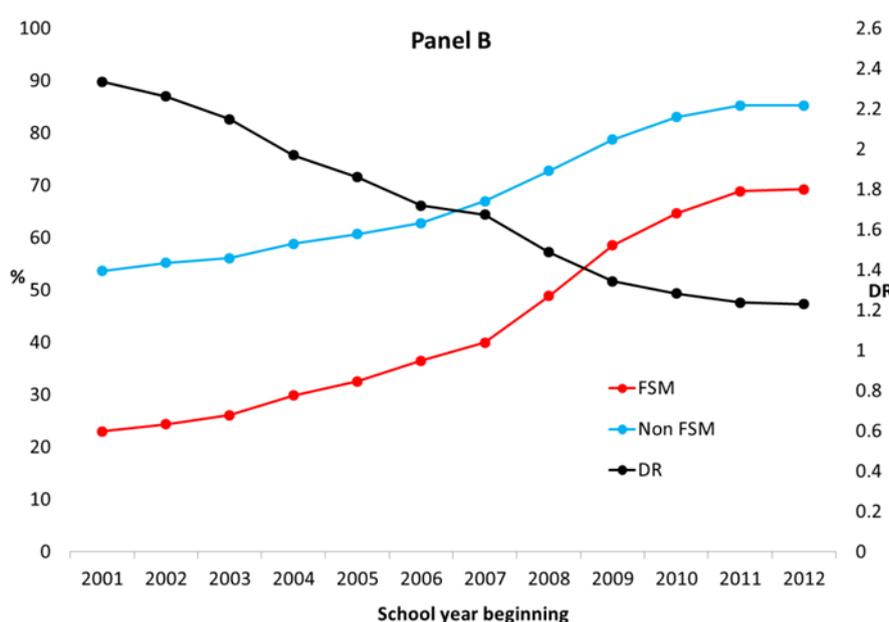


Series A: the denominator is the number of 15 year olds on roll at the beginning of the school year.

Series B: the denominator is pupils at the end of KS4.

Series C: includes International GCSEs.

LFS: estimates with 95% confidence intervals. 17-18 year olds plotted approximately in the year they would have reached the end of KS4.



- In 2012 about 18% of the pupils aged 4-18 claimed free school meals.

- Between 2001 and 2012 the gap between FSM and non FSM pupils closed and the DR fell from over 2 to just over 1.2.

- Concerns have been expressed that FSM take-up is neither a reliable nor a particularly discriminating indicator of social disadvantage.<sup>1</sup>

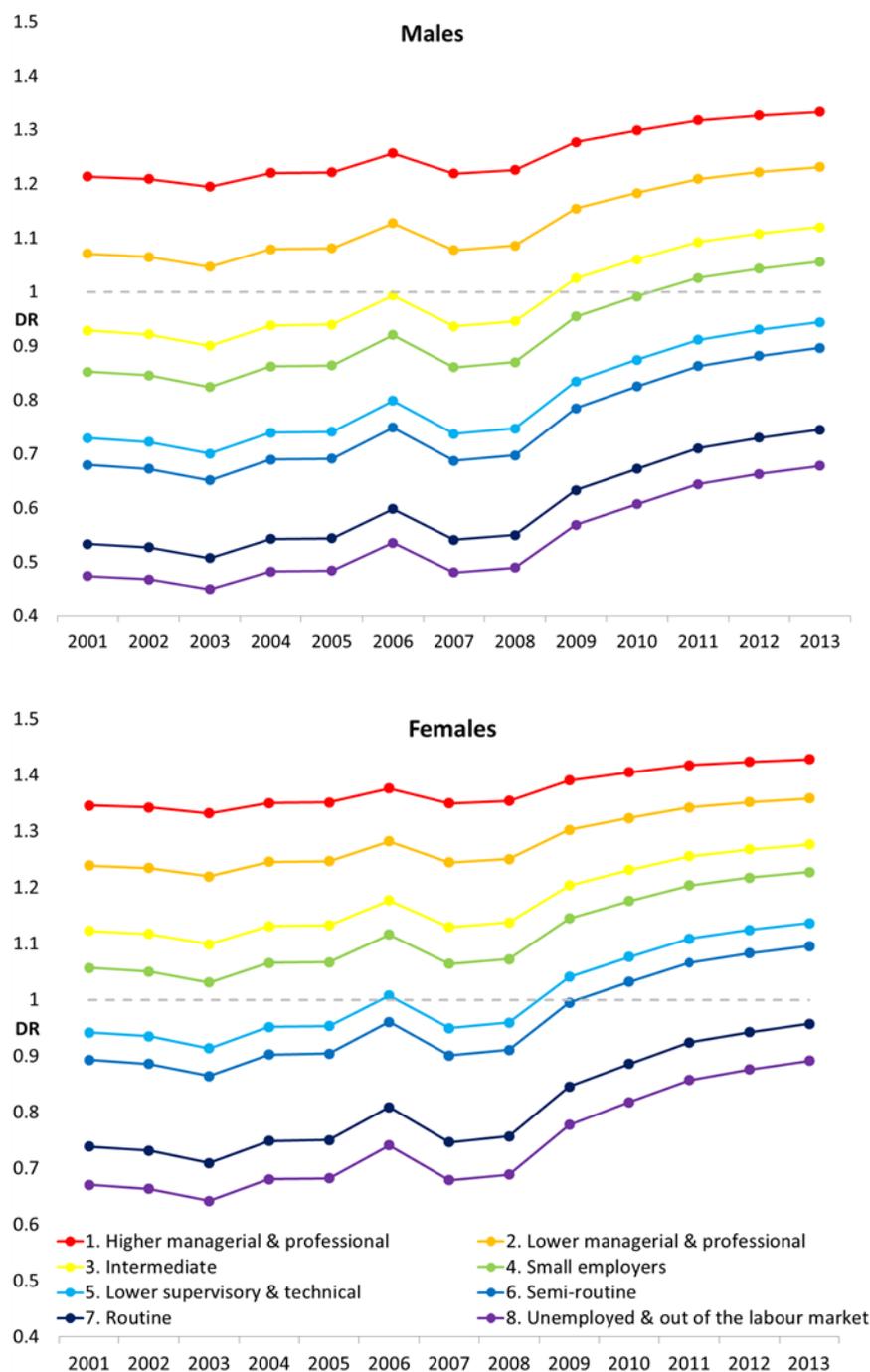
## Has social class inequality in obtaining 5+ GCSEs increased over time?

Nobody would deny that take up of FSM indicates something about levels of disadvantage. But it doesn't tell the whole story. Class disadvantage can manifest itself even among those families that do not claim or are not entitled to benefits. In Figure 2 we divide families into 7 social classes and a residual category of households where neither parent is in work.

### Figure 2: Between 2001 and 2013 there has been limited class convergence

*Disparity ratio by NSSEC: 17-18 year olds with 5+ GCSEs at grade C or above.*

*DR calculated relative to the average percentage crossing the threshold in the period 2001-2013.*



- Class disparities are large. In 2013 almost 90% of boys from higher managerial and professional homes passed 5 GCSEs but less than 50% from homes where the parents were in routine employment or not in employment at all did so. This is a large difference. It is as if children were buying a lottery ticket at the school fair that comes in two colours. Red tickets have odds of 9:1 on; while for indigo tickets the odds of success are only even. The catch is that after handing over their money the children must accept whichever colour of ticket the vendor gives them.

- Since 2001 there has been a very slight decrease in class inequality as measured by the disparity ratio. The overall spread of the trend lines in Figure 2 is slightly narrower in 2013 than it was in 2001. This is true both for males and females

- The decrease in inequality is mainly a matter of a slight catchup by children from households headed by a routine worker or by a parent who is either unemployed/not economically active.

- By 2013 boys from the bottom four social classes and girls from the bottom two had not yet reached the population average level of performance for the period as a whole.

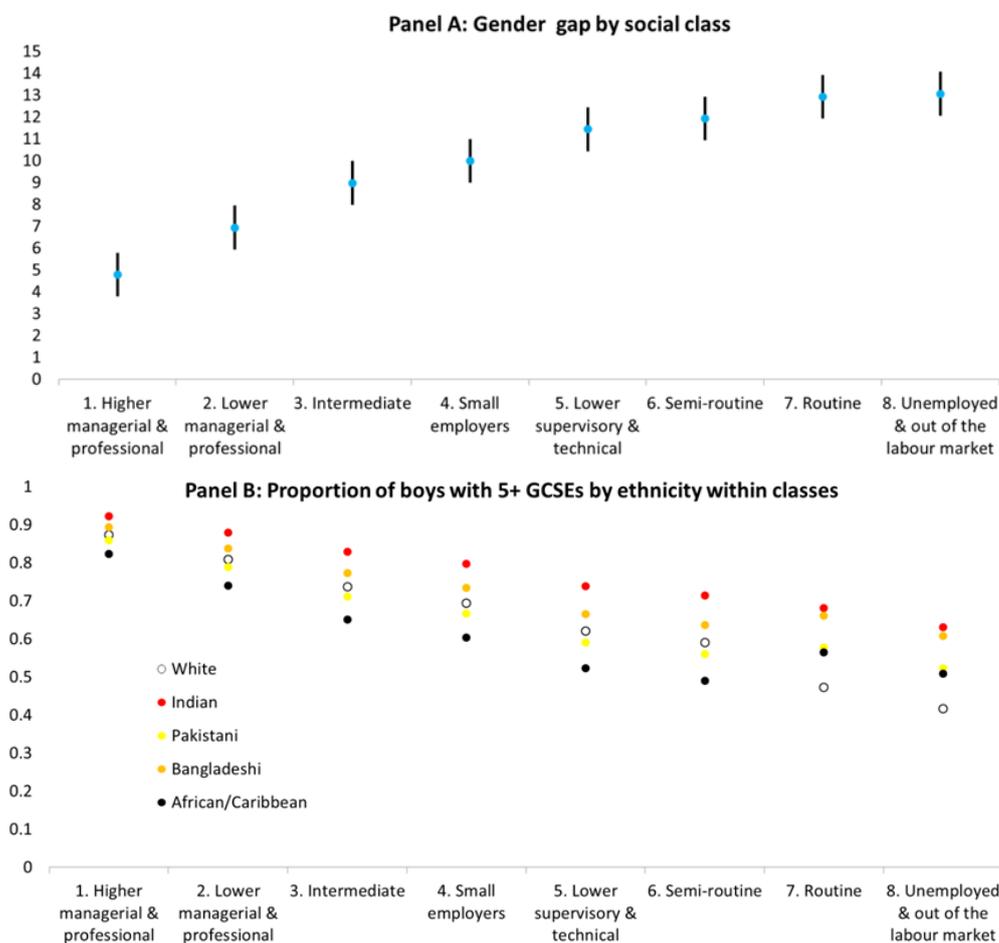
## Are working-class boys particularly disadvantaged?

In general girls outperform boys at KS4 but is there any evidence to support the idea that working-class boys are particularly disadvantaged?

### Figure 3. The gender gap in GCSE performance is wider at the bottom of the class structure

Panel A: Absolute difference in 2013 between the percentage of males and females achieving the GCSE threshold with 95% confidence intervals. Panel B: Proportion of boys in 2013 achieving the GCSE threshold by selected ethnic group within

NSSEC. NB the 95% confidence intervals for some of these proportions are large.



- Though the differences are quite small there is a clear class gradient to the gender gap. There is a similar gradient to the disparity ratio (not shown).

- This doesn't mean that there is anything categorically different about working-class boys. They are merely at the sharp end of a gradient that runs through the whole class structure.

- When we control for social class background some ethnic groups, notably the Indians and the Bangladeshis, do better than Whites.

- However at the bottom of the class structure White boys and girls (not shown) perform less well than all other ethnic groups.

One could describe this as the surprisingly good performance of working-class children from the African/Caribbean and Pakistani communities rather than the unexpectedly bad performance of White children. These apparently working-class ethnic minority homes may be very heterogeneous. The parents in some may have educational qualifications obtained abroad that are not rewarded by the British labour market, but are linked to skills and aspirations that help their children do better in school than would otherwise be expected.

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<sup>i</sup> See for instance

<http://www.bath.ac.uk/research/harps/Resources/The%20probity%20of%20FSM%20revised%2014.7.08.pdf>

