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FT Data

Grammar school myths

Chris Cook Author alerts Jan 28 2013 16:25 22 comments

There is an iron law in English education: as any given argument about any problem with schools progresses, the probability that someone will claim grammar schools are the solution rapidly tends towards 1.

I thought I would set out the data on the grammar counties, where children are sorted at the age of 11 according to an academic test.

To do this, I have defined a new region of England: Selectivia. I have removed the biggest selective counties – Kent, Lincolnshire, Medway and Buckinghamshire – from their geographical regions and shoved them together into one new region*. So what is it like? First, you can see that this region is quite well off, compared to most regions, especially London.

Region	IDACI score	FSM
East Midlands	0.195	12.0%
East of England	0.168	9.2%
London	0.340	22.4%
North East	0.245	17.4%
North West	0.233	16.2%
Selectivia	0.162	8.8%
South East	0.150	8.3%
South West	0.164	9.4%
West Midlands	0.236	16.4%
Yorkshire and the Humber	0.216	14.6%

The columns here are two measures of poverty. At left, the Income Deprivation Affecting Children Index ("IDACI") score for each region's 16 year-olds. This is a score based on the number of poor households in an area. At right is the FSM score, which records the proportion of children who are eligible for free school meals – an indicator of poverty among school-age children. In both cases, higher scores mean poorer areas.

So we would expect grammar school areas to do a bit better than average because they are wealthier. Here is how they do on the FT points score. We give pupils 8 points for an A* in any full GCSE down to 1 point for a G, and add up the scores they get in English, maths and their three best other subjects.

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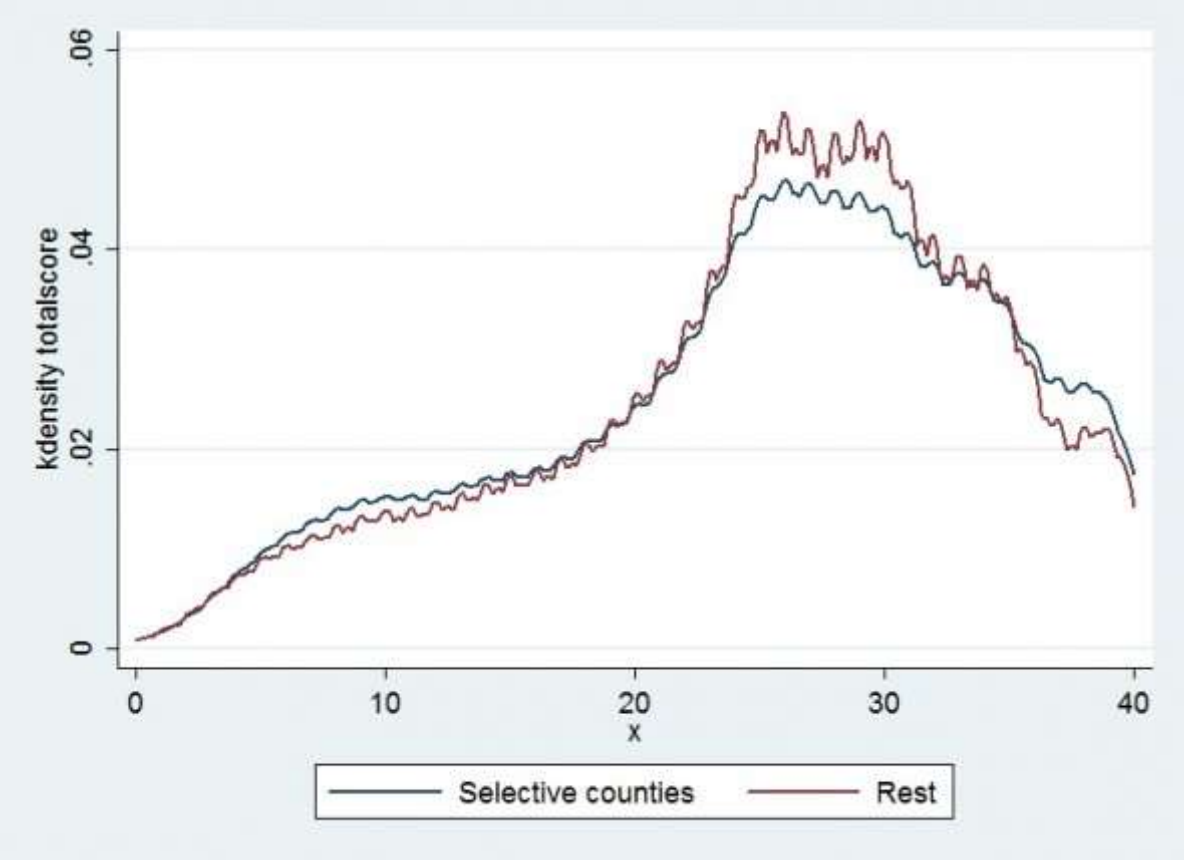
Region	FT score
East Midlands	24.5
East of England	25.6
London	26.7
North East	23.7
North West	24.8
Selectivia	25.2
South East	26.1
South West	25.8
West Midlands	24.3

Showing 1 to 10 of 11 entries

We can unpack a bit more detail than that. Below is a type of graph of results on the FT score. The line shows the distribution of grades from zero (no passes) to 40 (five A*s). Ignore the bumpiness: the higher the line is at any given point, the greater the share of the population is at or around that point.



So you can see that fewer children get scores in the high 20s in selective areas than in the rest of the country, and more get them in the high 30s and in the ultra-low scores. This is broadly as you would expect, from a system that deliberately divides children at the age of 11 into sheep and goats.

So is this trade-off efficient or good? It is impossible to tell if you do not know the underlying condition of the children. We would, after all, expect more high performers in these areas due to the wealth of the children.

To work out the aggregate effect, you can build a simple regression that links up performance to primary school performance, poverty, ethnicity, special needs, age and other stuff. Then you can ask it to draw out the expected change in grades you can expect if a child is in Selectivia, or if they are in another region.

Here are the results.

Show 10 ▾ entries Search:

Region	Change
East Midlands	0
East of England	0.631
London	2.108
North East	-0.301
North West	0.334
Selectivia	0.177
South East	0.767
South West	0.778
West Midlands	0.074

Showing 1 to 10 of 11 entries

What this table gives you is the expected difference in GCSE points (1 point = 1 grade better in one subject) between a given child in the East Midlands** and a similar child in the other places, once we have taken account of background.

You can see that the score is positive: the selective region is better than the East Midlands, but not by much. As far as we can tell, introducing selection is not good at raising school productivity. In fact, the region is actually a bit of a laggard.

So what about the commonly made claim that grammars boost social mobility? Maybe they do not increase everyone's results, but do they close the rich-poor gap? Well, here is the average score attained by FSM-eligible children.

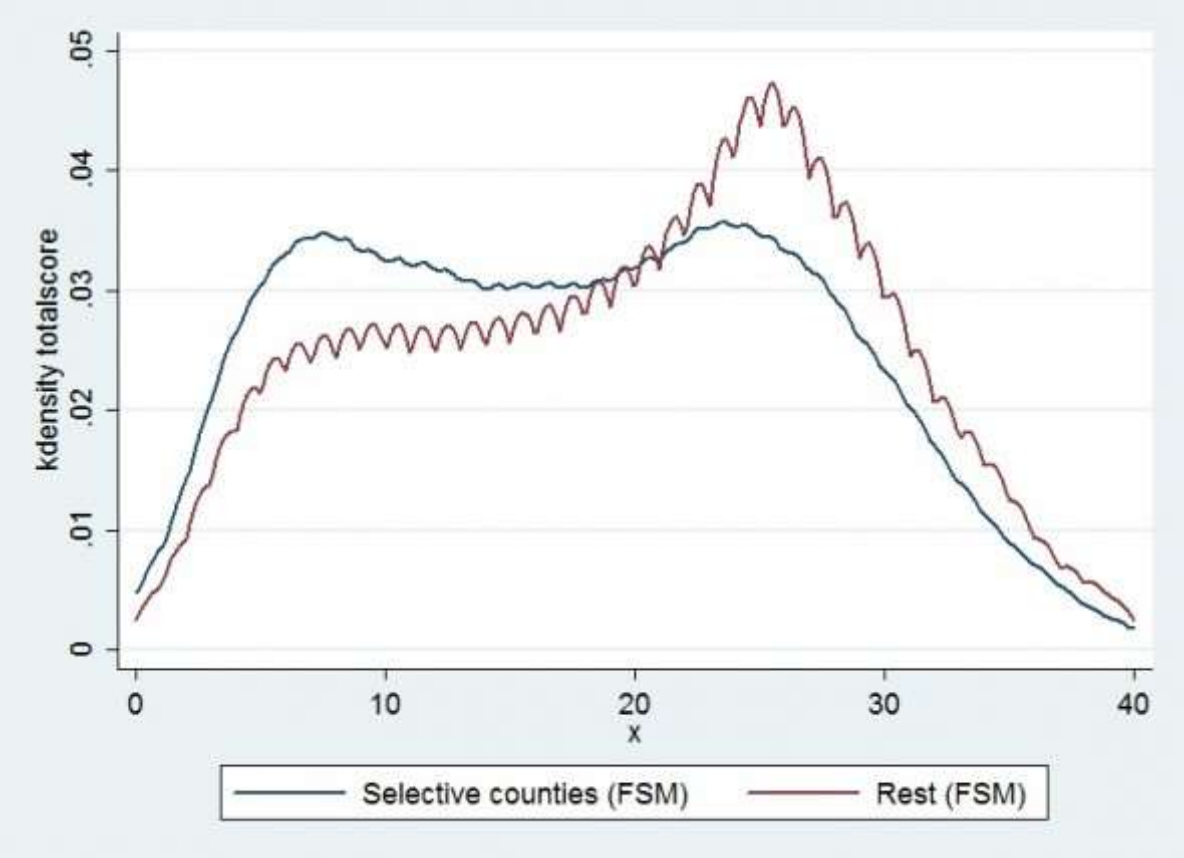
Show 10 ▾ entries Search:

Region	Total score
East Midlands	18.7
East of England	19.8
London	23.5
North East	17.4
North West	18.8
Selectivia	17.7
South East	19.4
South West	19.8

West Midlands 19.2

Showing 1 to 10 of 12 entries

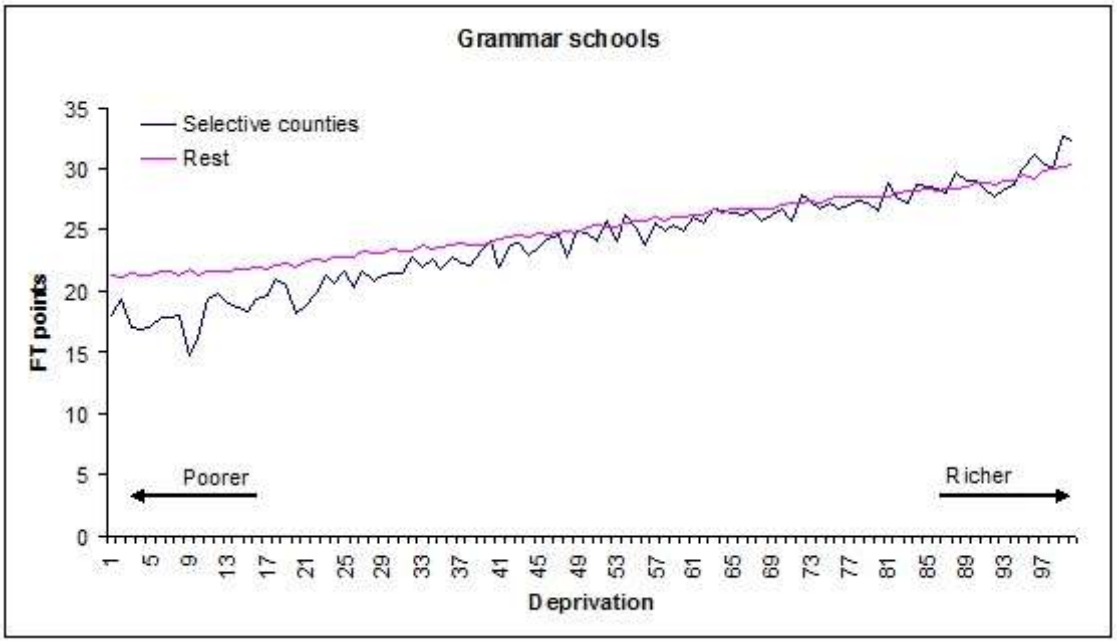
And the same attainment graph as before, but solely for FSM-eligible children:



You can see that poor children do dramatically *worse* in selective areas.

There is an narrower idea out there in the ether that grammar schools are better for propelling poor children to the very top of the tree. But, again, that is not true. Poor children are less likely to score very highly at GCSE in grammar areas than the rest. Note that the blue line is below the red on the very right hand side of the graph.

Indeed, I think this whole story is neatly encapsulated by one graph to follow. If you plot how well children do on average by household deprivation for selective areas and for the rest of the country, you can see that the net effect of grammar schools is to disadvantage poor children and help the rich.



At the left hand side of the graph, where poor children's results are, you can see selective areas do much worse. At the very right, you can see a few very rich children do better. This is all driven by the process of selection itself: poor children are more likely to be behind at the age of 11, and less likely to get places in grammars.

Grammar schools are a part of many people's identities: having won admission to a selective state school plays an important role in the story of their life, especially if they came from a less privileged family. But, as a way to raise standards or to close the gaps between rich and poor, it is hard to find evidence that they are effective.

> ** The other smaller grammar areas are awkward, since they are small, so parents can skip over the border if things go badly on the selection exams. That said, if you do include the other selective areas, nothing actually changes.*
>
> *** Because the East Midlands is first alphabetically, and that is how our statistical software chooses by default.*

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