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Explaining Human Capital Inequalities: Evidence from Linked Data from Millennium Cohort Study and the National Pupil Database

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Objectives

Our study has three objectives: (a) to document the educational achievement gap between children from richer and poorer backgrounds; (b) to show how much of the achievement gap is explained by school quality, parental investment and children's own investment; and (c) to estimate the effect of parental investments, and children's activities on achievement.

Methods

Using linked data from MCS and NPD at age 7, 11 and 16, we estimate the test score gap between children from advantaged and disadvantaged backgrounds. We use socio-economic status measured by eligibility to free school meals and family income. First, we estimate the test score gap between the two groups controlling for predetermined characteristics. Then, we progressively add the measures of school quality; parental time and material factors; and children's time investments. We compare the coefficients that include school, parent and child factors with the ones estimated without to understand the role each played in explaining the achievement gap.

Results

At age 7 children from poorer families score 0.58 of a standard deviation (SD) less in maths than their richer peers. When we control for school quality and parental investments, the gap declined to 0.35 SD- implying these factors account for 40% of the gap. Similarly, by age 16, poorer children score 1.33 of a grade less in their average attainment 8 GCSEs. Controlling for school quality, and parental and children investments reduced the gap to 0.82 of a grade. These factors explain about 38% of the attainment gap. We also find that school quality, educational activities by parents and children significantly and positively related with achievements. Children's activities in unorganised leisure and parent's leisure intensive material investments are negatively correlated with achievements.

Conclusion

Understanding the determinants of human capital inequality is very important to identify the role of different stakeholders and to design relevant policies. In this study, we document the role of schools, parents and children themselves in driving achievements through primary school outcomes to high-stakes exams.

