

Inequalities in education outcomes

Education, Employment, Evaluation
Sector

IFS

Thematic overview

- Inequalities in:
 - Educational outcomes/ trajectories
 - School results; staying on post-16; NEET; HE participation
 - Social and behavioural outcomes
 - Teenage attitudes and behaviours, Social skills, Adult crime, health.
- Dimensions of inequality considered
 - Parental SES
 - Ethnicity
 - Neighbourhood characteristics
 - Month of birth

Project overview

- **“Explaining the socio-economic gradient in child outcomes”:**
 - Focus on role of “attitudes, behaviours and beliefs” in education and social outcomes
 - Early childhood through to teens
- **Widening participation in Higher Education:**
 - Uses unique linked administrative datasets
 - Big disparities in HE attendance by “deprivation” (FSM and local area)
 - Explained entirely by differences in school results esp. at A’level
- **The impact of early cognitive and non-cognitive skills on later outcomes:**
 - Importance of social skills for later life outcomes, both economic and social
 - Differences by SES in acquisition and impact
- **Month of birth work:**
 - Big summer-born penalty at school (and HE) due to school admissions
 - Policy implications

The socio-economic gradient in child outcomes: the role of attitudes, behaviours and beliefs

Institute for Fiscal Studies

Pedro Carneiro, Haroon Chowdry, Claire Crawford,
Lorraine Dearden, Alissa Goodman, Luke Sibieta

CMPO

University of Oxford

“Explaining the socio-economic gradient in child outcomes”

- Routes through which socio-economic position (SEP) affects
 - Educational attainment and progression
 - Social and emotional development
- Different life stages
 - Early years (MCS)
 - Primary (ALSPAC)
 - Secondary (LSYPE)
- Role of different factors, including parenting activities, and parent and child behaviours, attitudes and beliefs

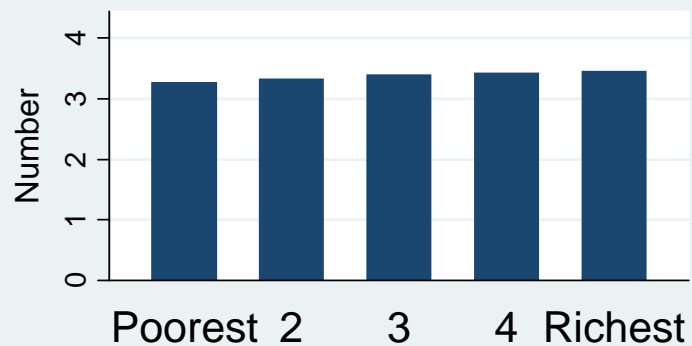
“Explaining the socio-economic gradient in child outcomes”

Examples of transmission mechanisms considered:

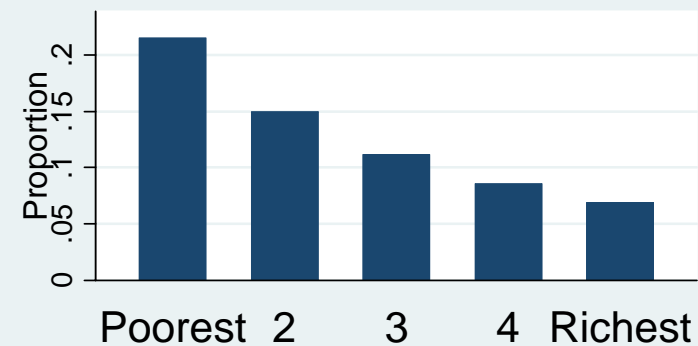
- Home learning environment (3,5)
- Parenting style and rules (3,5)
- Family health and well-being (3,5,9)
- Family-child interactions (3,5,9,13)
- Aspirations and expectations for age 16 and HE (9,13)
- Ability beliefs (8,13)
- Locus of control (8,14)
- Poor behaviour at school, anti-social behaviour (8,9,13)
- Experiences of bullying (8, 13)
- Material resources (13)

Socio-economic gradients (MCS)

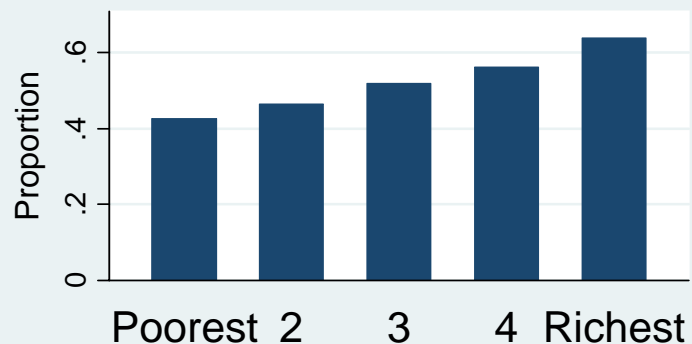
Birthweight - Kg



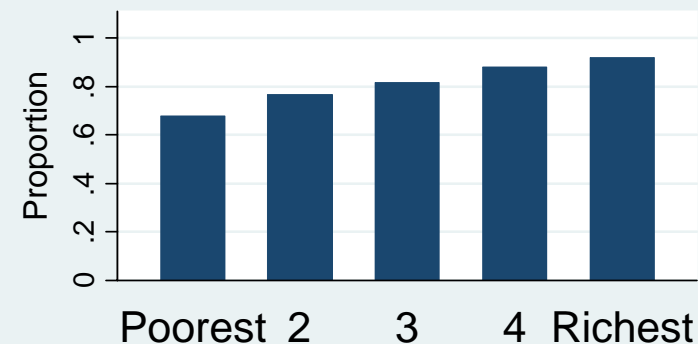
Suffered Post-Natal Depression



Read to Every Day at 3

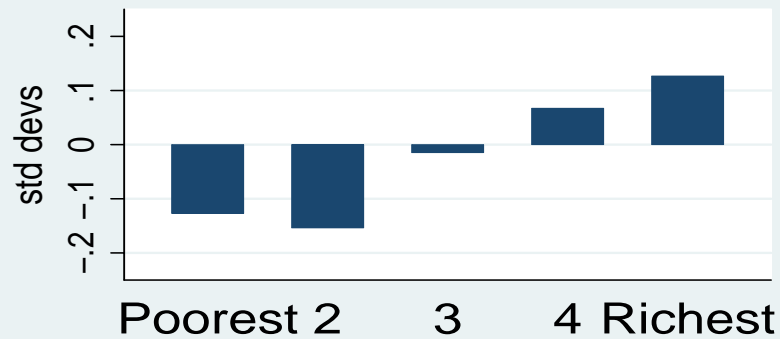


Regular Bed Times at 3

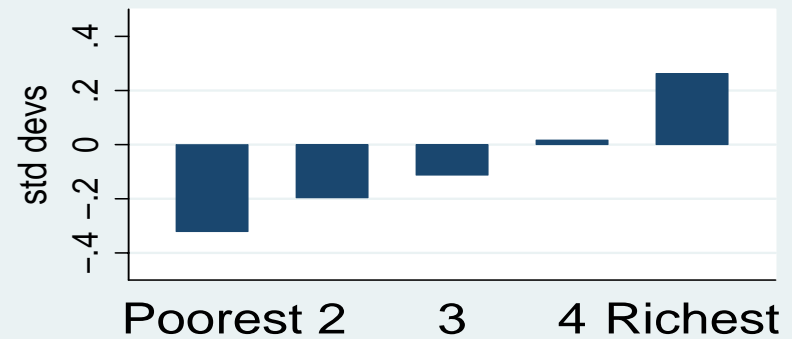


Socio-economic gradients (ALSPAC)

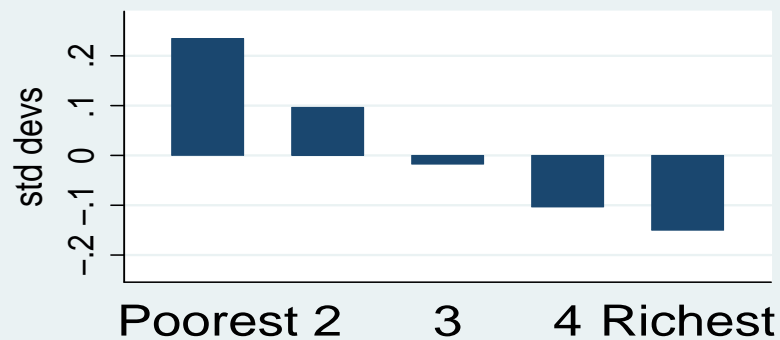
YP ability beliefs



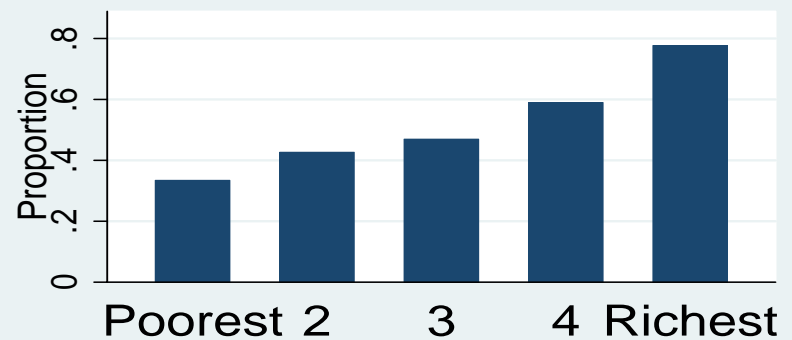
YP locus of control



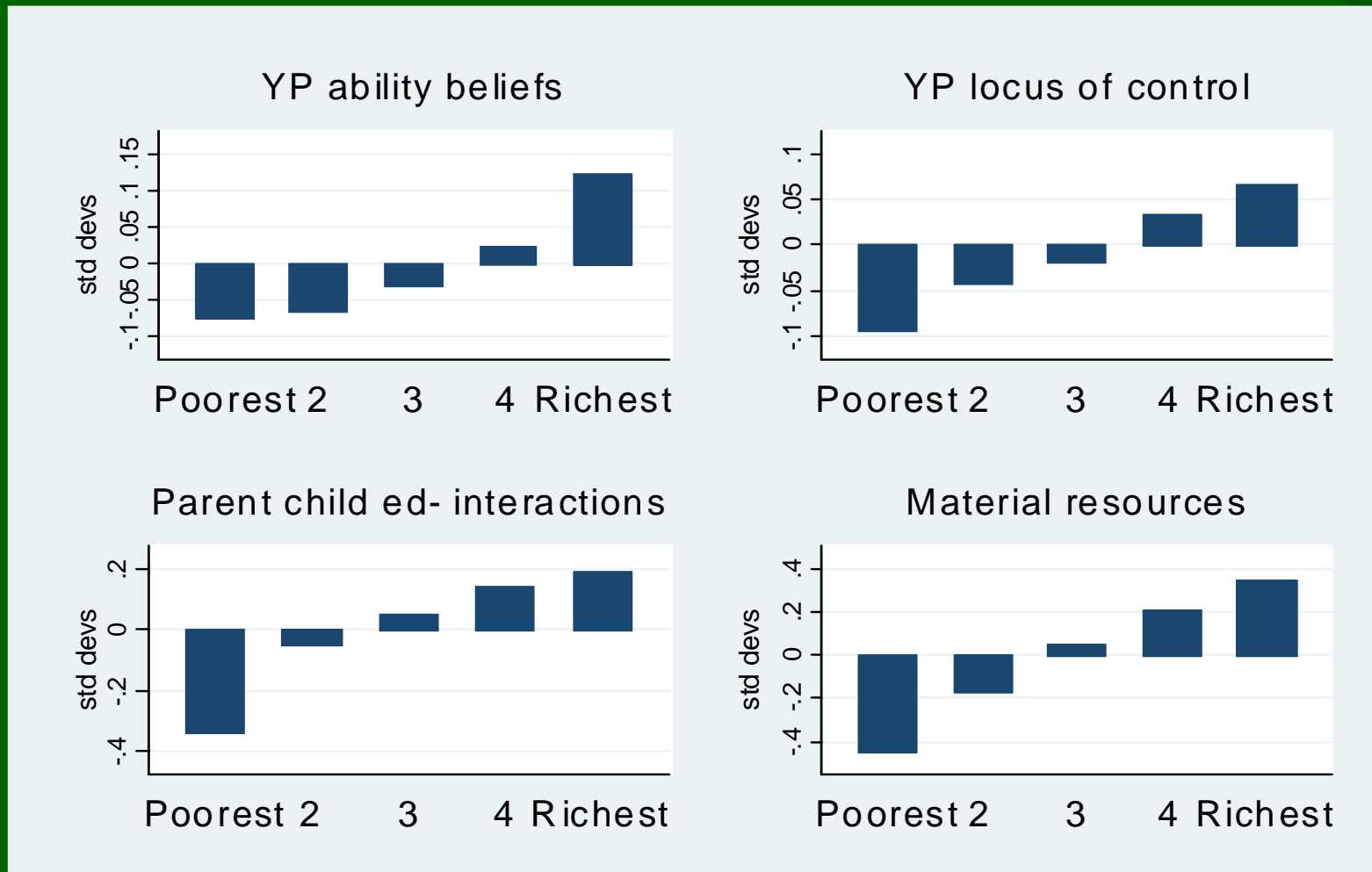
Hyperactivity



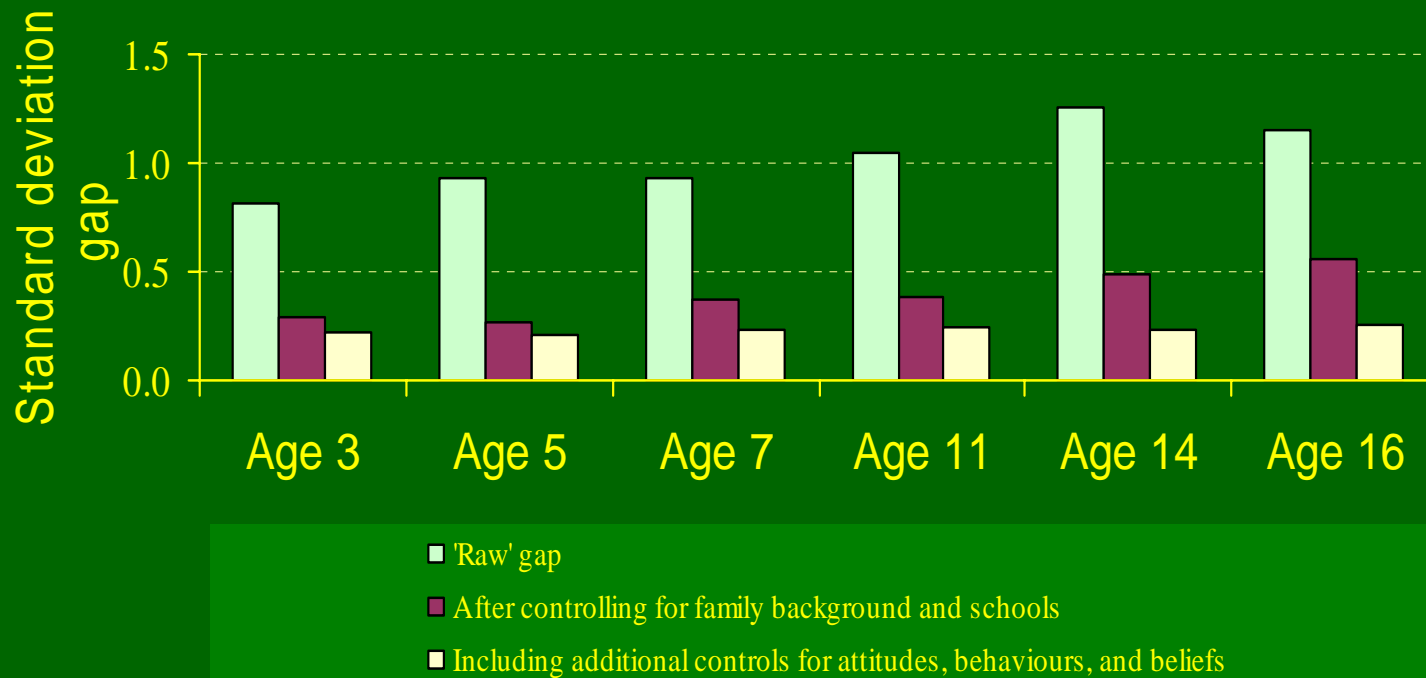
Mother hopes YP will go to uni



Socio-economic gradients (LSYPE)



Summary of findings



Summary of findings

- Pre-school: home learning environment, parenting styles and rules, family health
- Primary: early years influence, parental aspirations child's ability beliefs, locus of control, emotional and behavioural development
- Teenage years: child's own expectations and aspirations for education; bullying, anti-social behaviour, education behavioural problems

Widening Participation in Higher Education: Analysis using Linked Admin Data

Institute for Fiscal Studies

Haroon Chowdry, Claire Crawford, Lorraine Dearden, Alissa Goodman

Institute of Education

Centre for Economic Performance

Widening Participation in HE

Research Questions:

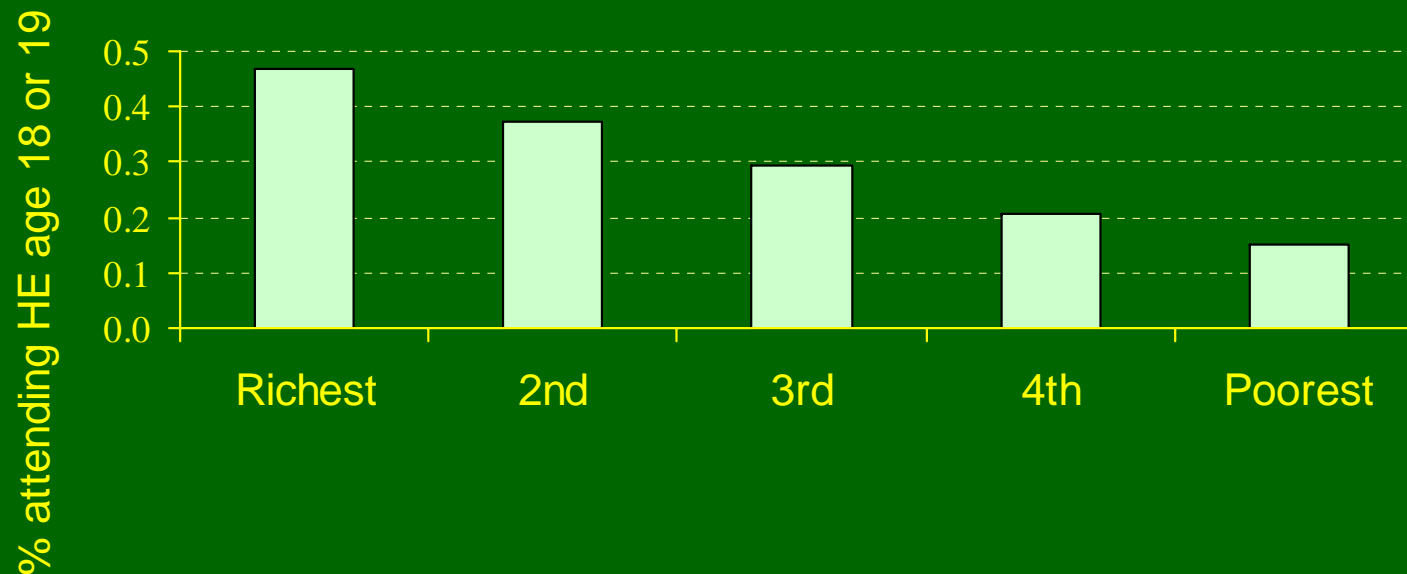
- How does the likelihood of HE participation vary by socio-economic background?
- How much of this gap can be explained by prior achievement?
- How does the type of HE participation vary across socio-economic groups?

New longitudinal admin data

- Linked individual-level administrative data
 - School, FE and HE records from NPD, ILR and HESA
- Consider two cohorts:
 - In Year 11 in 2001-02 or 2002-03
 - Potential age 19 HE entry in 2004-05 or 2005-06 (age 20 entry in 2005-06 or 2006-07)
- State and private school students

Summary of findings

Big gaps in HE participation by deprivation score

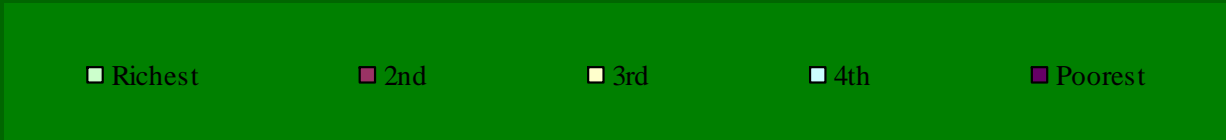
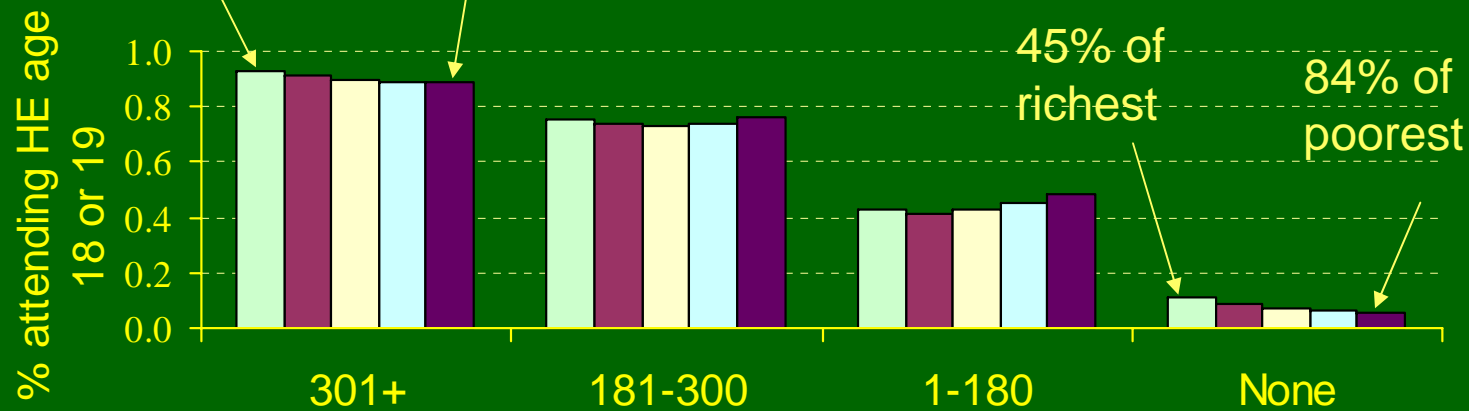


Summary of findings

But no gap in HE participation conditional on A level score

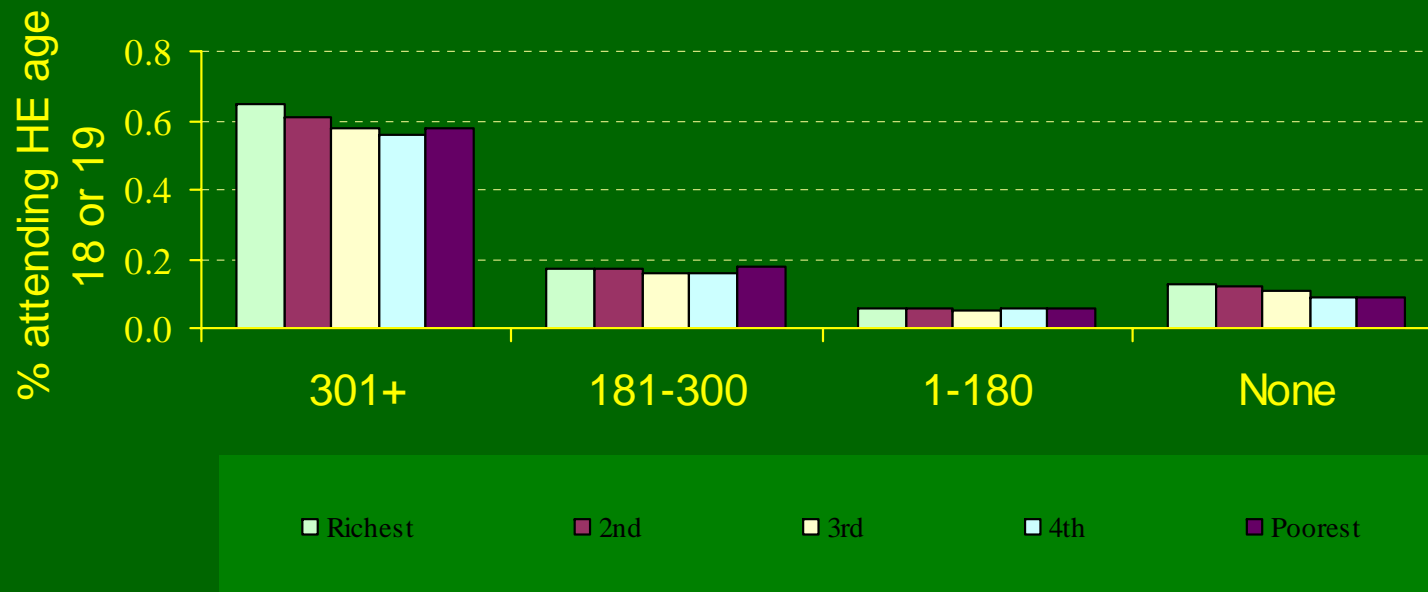
25% of richest get top A levels

3% of poorest get top A levels



Summary of findings

Similar finding for participation in “high status” university



HE participation (state school males)

	No controls	Individual and school controls	Plus Key Stage 2 results	Plus Key Stage 3 results	Plus Key Stage 4 results	Plus Key Stage 5 results
4 th deprivation quintile	0.065** [0.003]	0.048** [0.002]	0.029** [0.002]	0.017** [0.001]	0.003* [0.001]	0.000 [0.001]
3 rd deprivation quintile	0.134** [0.003]	0.085** [0.002]	0.055** [0.002]	0.035** [0.002]	0.010** [0.002]	0.001 [0.001]
2 nd deprivation quintile	0.201** [0.004]	0.118** [0.002]	0.079** [0.002]	0.052** [0.002]	0.017** [0.002]	0.001 [0.002]
Least deprived quintile	0.288** [0.006]	0.160** [0.003]	0.110** [0.003]	0.076** [0.002]	0.031** [0.002]	0.007** [0.002]
Observations	550,972					
R-squared	0.053	0.128	0.253	0.333	0.436	0.584
F-test of extra controls		0.000	0.000	0.000	0.000	0.000

Conclusions

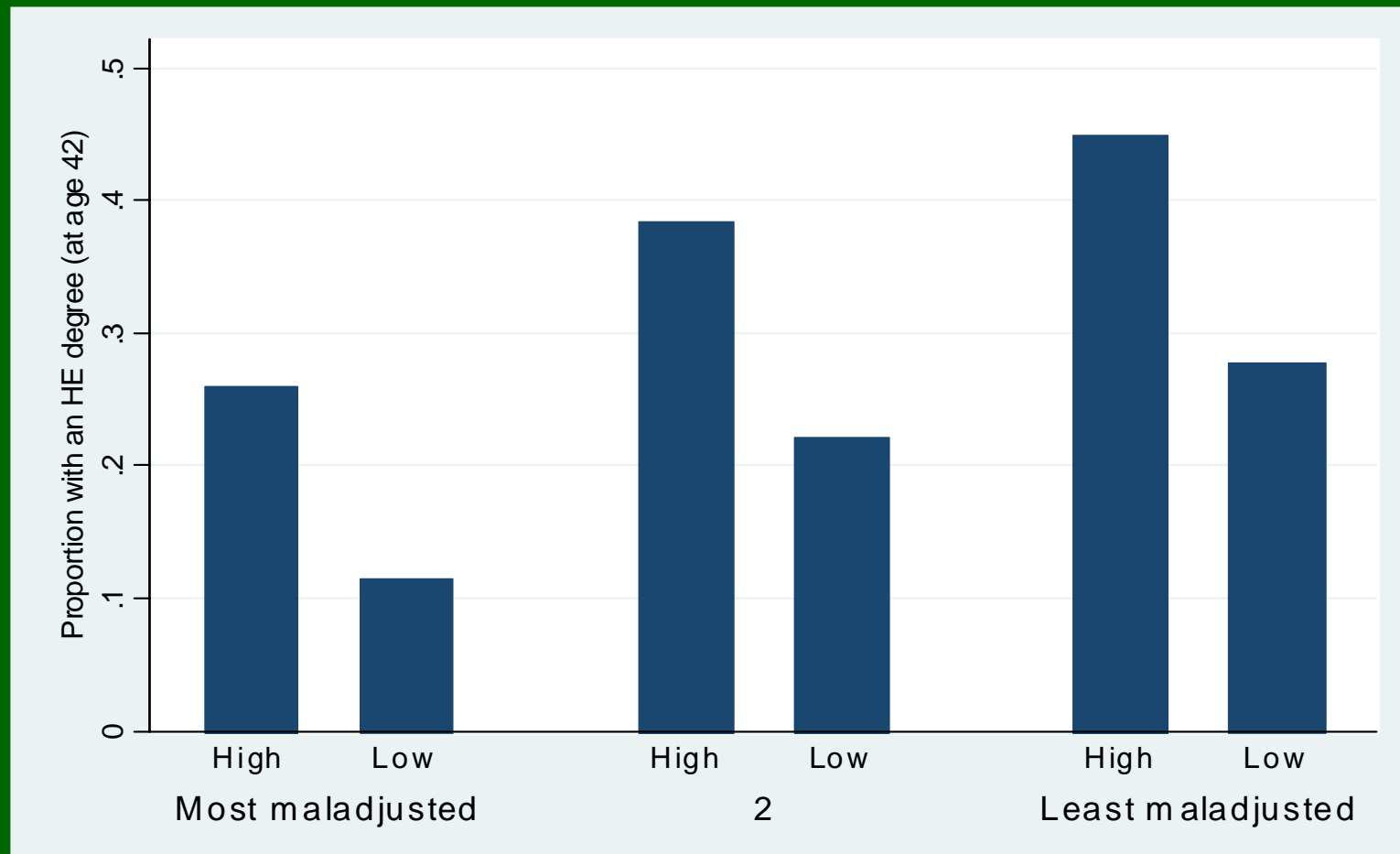
- Widening participation in HE to students from deprived backgrounds is largely about tackling low prior achievement
- Focusing policy interventions post compulsory schooling unlikely to eliminate raw socio-economic gap in HE participation
 - But does not absolve universities

The impact of early cognitive and non-cognitive skills on later outcomes

Pedro Carneiro, Claire Crawford, Alissa Goodman

The importance of social skills

Degree attainment by social maladjustment and parent SES



Source: NCDS

Effect of skills on adult outcomes

Differences by SES?

		Highest qualification O-levels	Highest qualification HE degree	Poor or fair health	Teenage motherhood
Social skills (age 7)	Low	0.054**	0.034	-0.051	-0.037**
	High	0.023**	0.034**	-0.011**	-0.004**
Cognitive skills (age 7)	Low	0.201**	0.099**	-0.050	-0.030
	High	0.116**	0.167**	-0.042	-0.033**
Interaction (age 7)	Low	0.025	-0.016	-0.030	-0.029*
	High	0.002	0.004	-0.003*	-0.009

Source: NCDS

Effect of skills on adult outcomes

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Conclusions

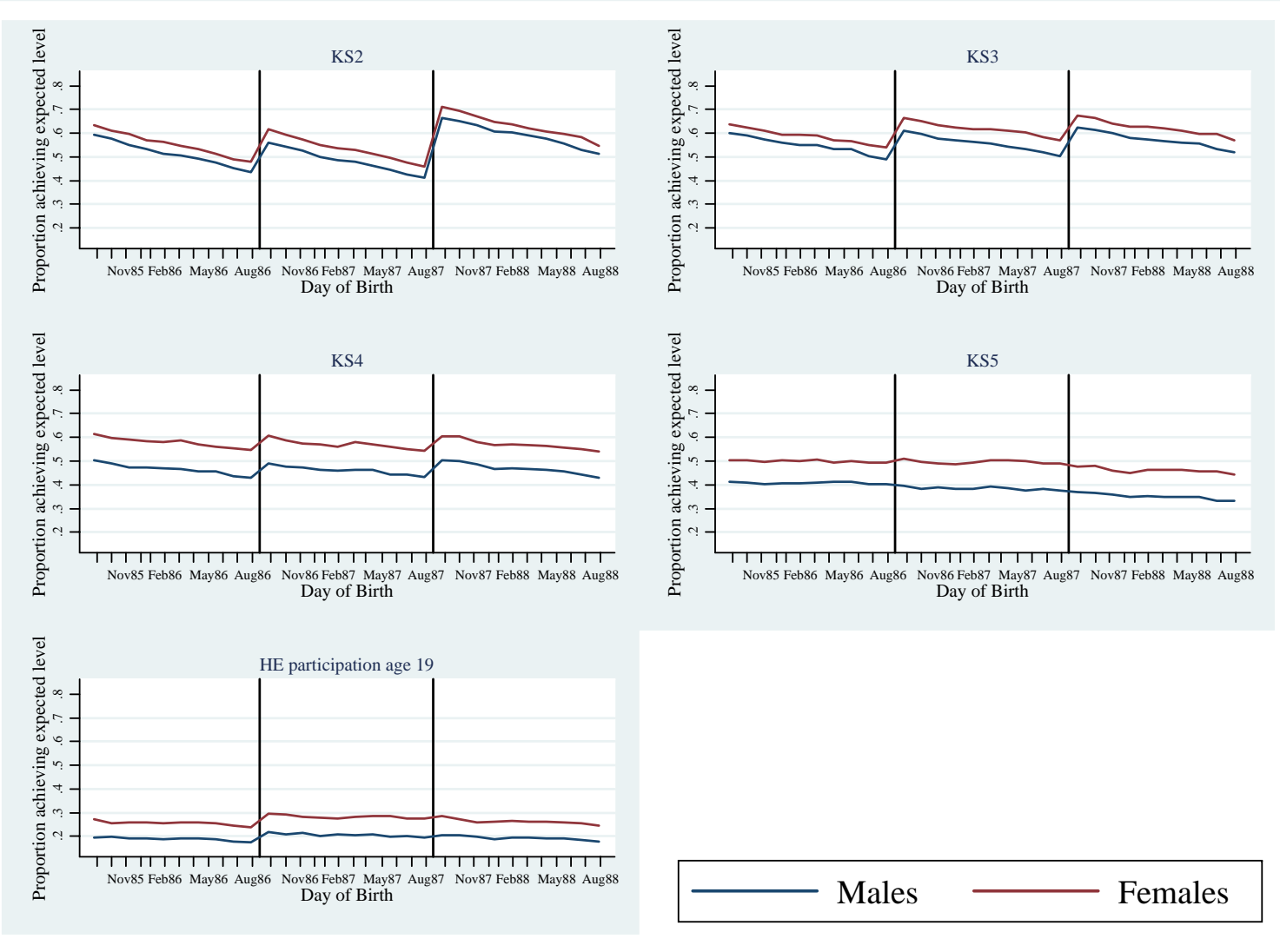
- Non-cognitive skills important for a range of outcomes
- Low SES individuals benefit relatively more from non-cognitive skills
- Early investments in non-cognitive skills may be cost-effective?

And finally.....

When you are born matters:
the impact of date of birth on child
cognitive outcomes in England

Claire Crawford, Lorraine Dearden & Costas Meghir
Institute for Fiscal Studies

Education outcomes by date of birth



Summary

- August-born children experience significantly poorer educational outcomes than September-born children
- Explanations tested
 - Age of sitting the test (absolute age) effect
 - They are younger when they sit the tests
 - Age of starting school effect
 - They start school at a younger age
 - Length of schooling effect
 - They receive less schooling prior to the test
 - Age position effect
 - They are the youngest relative to others in their class
- Almost entirely due to differences in the age at which they sit the tests.
- Starting school earlier is marginally better for August born children
 - They benefit from having more time in school

Possible policy options?

- Flexibility in school starting age not enough!
- Age adjustment of tests/testing when ready
 - Could use principle that proportion reaching expected level should not vary by month of birth
 - We show a simple linear adjustment could be appropriate
 - Alternatively could set expected level by age (rather than school year)
 - e.g. reach Level 4 by age 11½ rather than end of Year 6
 - But requires more testing opportunities (“testing when ready”)

Ongoing/ future work

- Social mobility
 - Collaboration with Paul Gregg/CMPO
 - Changes in correlations between parental income and GCSE results
- Disadvantaged pupil premium
- Month of birth: social outcomes
- Children born out of wedlock