



Education and Equity

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Centro de Estudios Andaluces
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Outline

- Skill formation
- Efficiency – how effectively does the education system work? Are the skills produced valuable?
- Equity – how fair is the distribution of education and how does it impact on socio-economic inequalities?

How are skills are produced?

- Largely in childhood/ during schooling
- Socio-economic gaps in cognitive and non-cognitive skills emerge early
 - Carneiro and Heckman, 2004; Feinstein, 2003
- Strong intergenerational component to education and not all of this is genetic
 - Ermisch and Francesconi (2001); Chevalier et al. (2007); Plug (2004); Sacerdote (2002)

How are skills produced?

- At home/ largely outside of school
- Only around 10-20% of the variation in education achievement between different pupils can be explained by schools
- Even less variation in other outcomes, such as well being, is between schools
- **Family and social environment are crucial**
- Neighbourhood less so

Teddlie and Reynolds, 2000; Vignoles et al. CEE
unpublished report 2009

How are skills are produced?

- Early interventions are key
 - *does not mean that it is impossible to design effective interventions for adulthood*
- Hard to find evidence of effective adult policy interventions
- If we cannot upskill adults easily – equity early in the schooling system has crucial implications for long run inequality and social mobility

Education and efficiency

- How effectively does the education system work?
- Are the skills produced valuable?
- Rate of return analyses tell us about the efficiency of education investment

Education and efficiency

- Economic value of education remains high despite rapid expansion of education systems
- Return to education is starting to fall however and in some countries over education is a real problem

Global Patterns in the Returns to Schooling

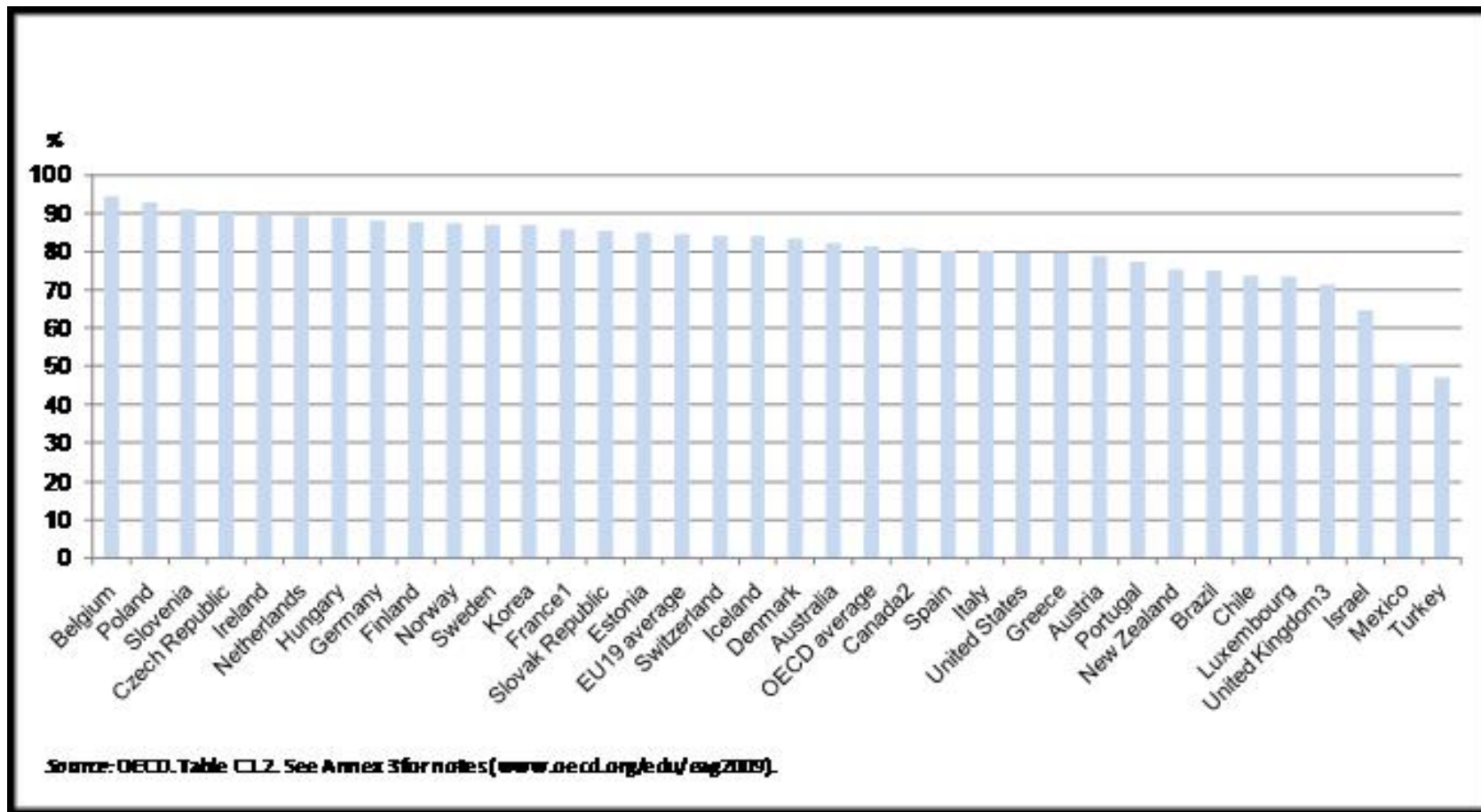
- Average global return to a year of schooling is 10%
- Falling returns to education by level of economic development and level of education as predicted by theory
- Average global return has fallen by 0.6 percentage points in last 12 years, as average schooling levels have risen
- Historically very high private rates of return to higher education – pressure to fund HE
- Women earn higher returns (except at primary level)

Global policy response

- Further expansion of education
- Focus on compulsory education and universal primary education
- Some shift of resources from higher education to earlier in the system
- Emphasis on female education

SUCCESS!!!

OECD full time and part time participation in education at age 15-19 in 2007



Quality not quantity

- Type of education matters not just years of education
- Higher demand for certain types of skill
 - E.g. in UK, US, Northern Ireland very high returns to and demand for quantitative skills
 - E.g. in UK minimal returns to arts degrees – some estimates are zero
- Education system must not subsidise unproductive education

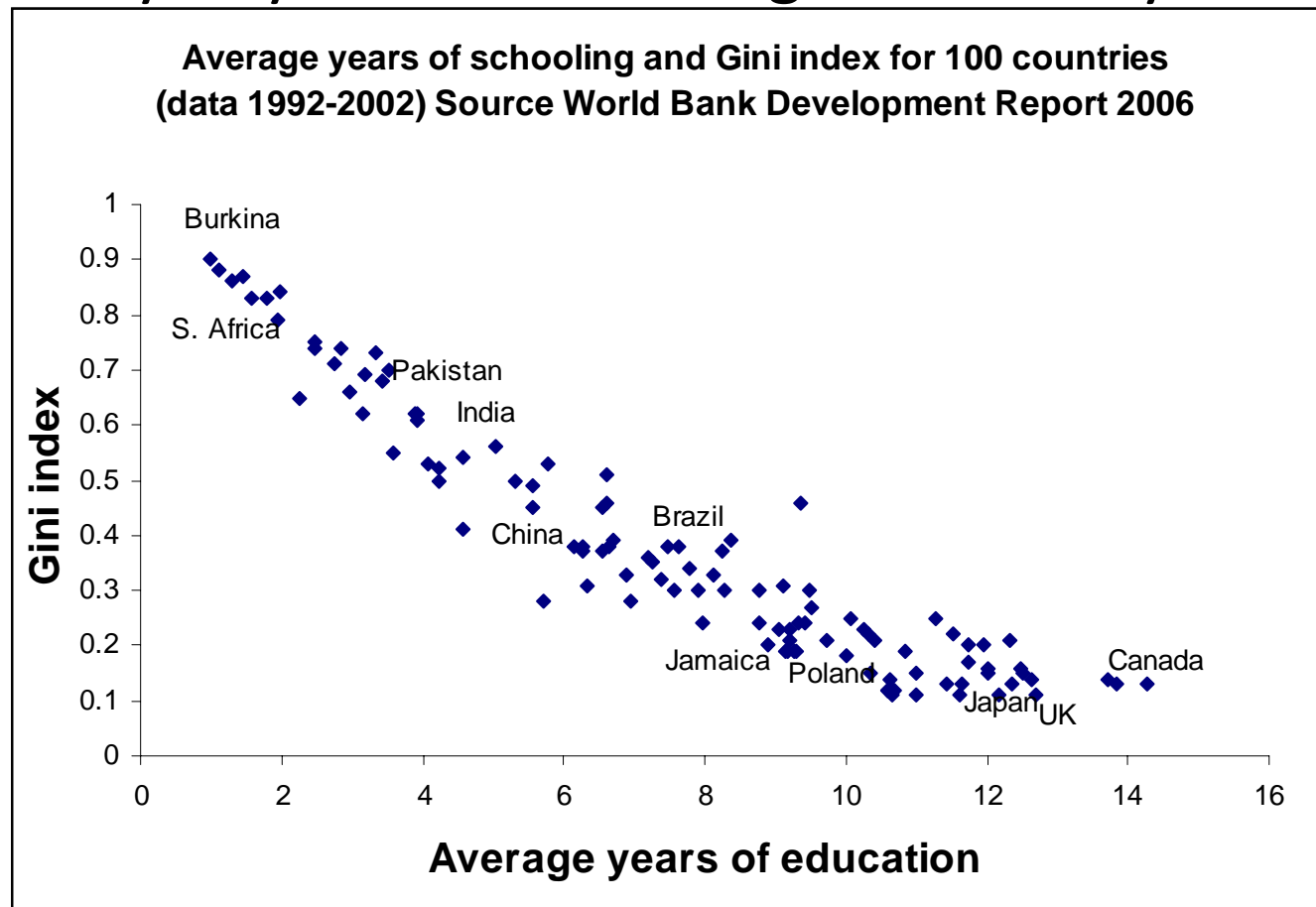
Quality not quantity

- Vocational education is crucial and varies across countries
- Vocational routes are not effective in all countries
- Whilst the higher education route is increasingly emphasized Not all HE is valuable in all countries

Impact on equity?

- Key question is how this expansion of education has impacted on equity ?
- Empirically, countries with more average years of education have less inequality in education achievement

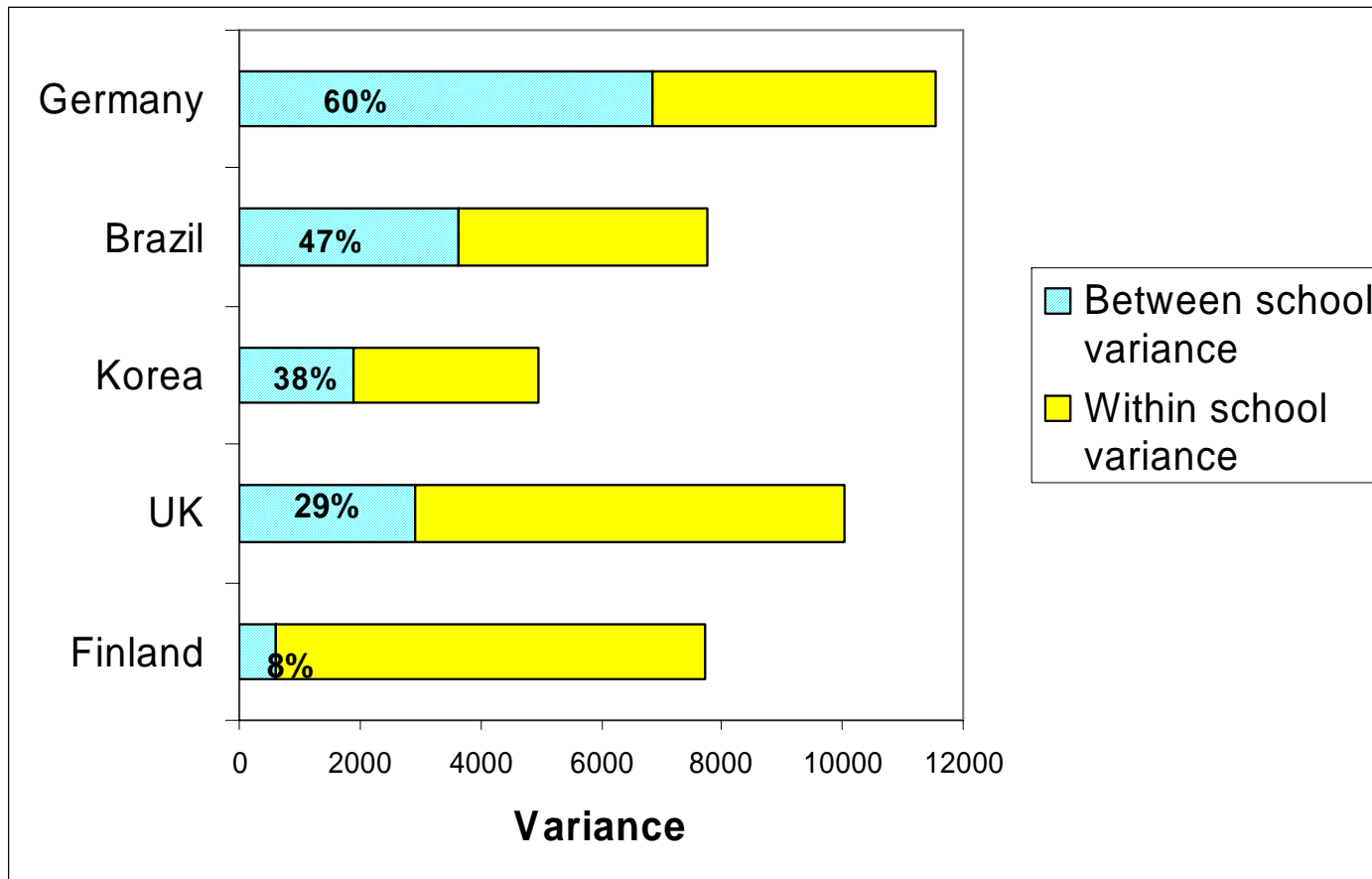
Relationship between average years of schooling and inequality of years of schooling measure by Gini Index



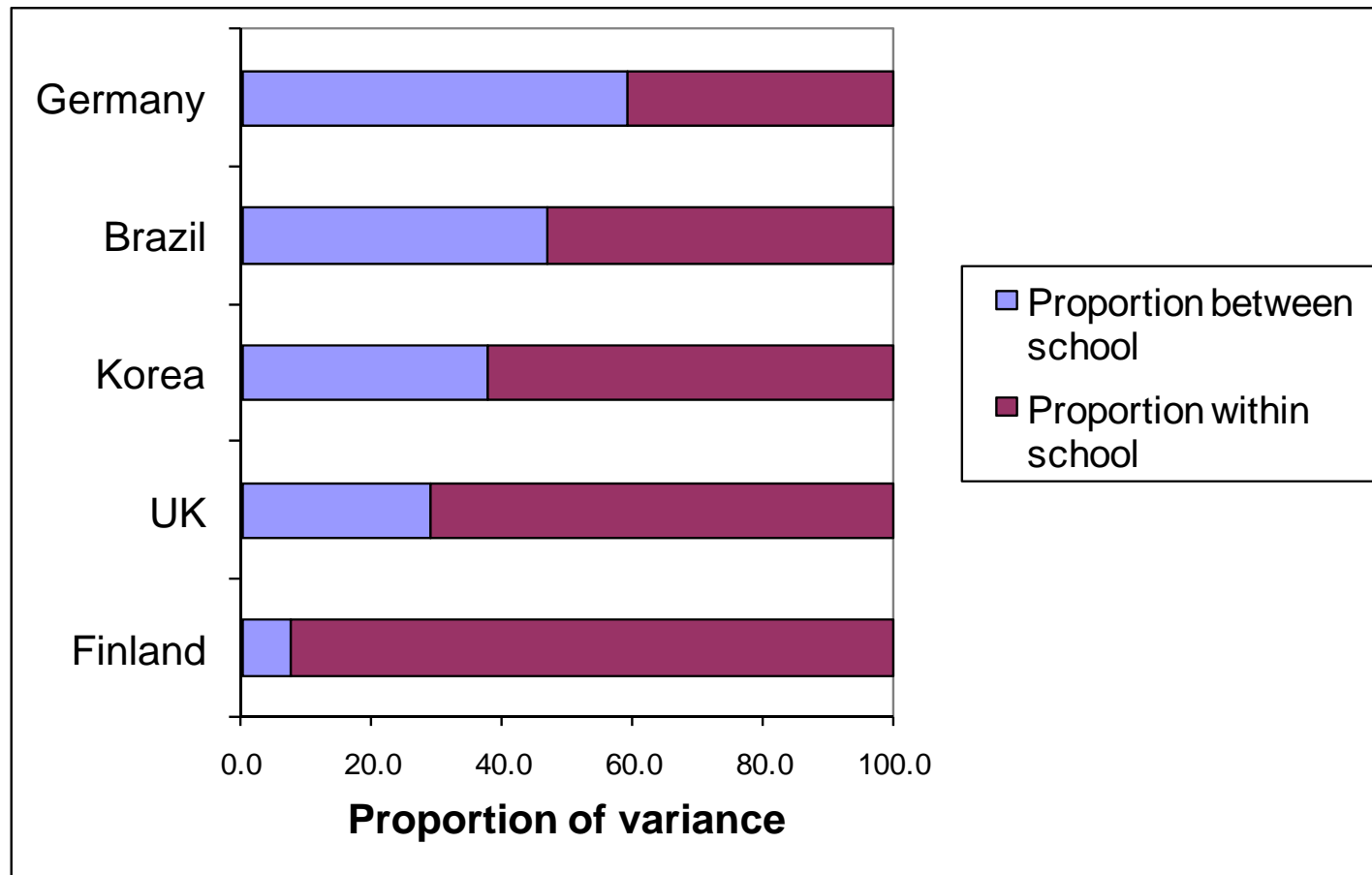
Impact on equity?

- Distribution of education varies substantially by country
- Some education systems more equitable than others
- In some countries much of the inequality in education achievement is across schools
 - A segregated system
- In some countries the inequality is within schools

Total, between school and within school variance in PISA 2000 reading literacy (OECD 2005) Figure 2.1



Proportion of variance in PISA (2000) reading literacy that is between and within school (OECD 2005) Fig. 2.2



The UK example...

- % of GDP spent on education rose steadily but not dramatically since 1990s

-5.2% in 1995 to 5.9% in 2006

- % of GDP spent on primary and secondary education increased

-3.6% in 1995 to 4.3% in 2006

Participation

- Long run upward trend in participation
- Rise in age 16 staying on rate

1985	1997	2009
50%	70%	80%

- HE participation rate stable at around 40%

Inequality in the UK

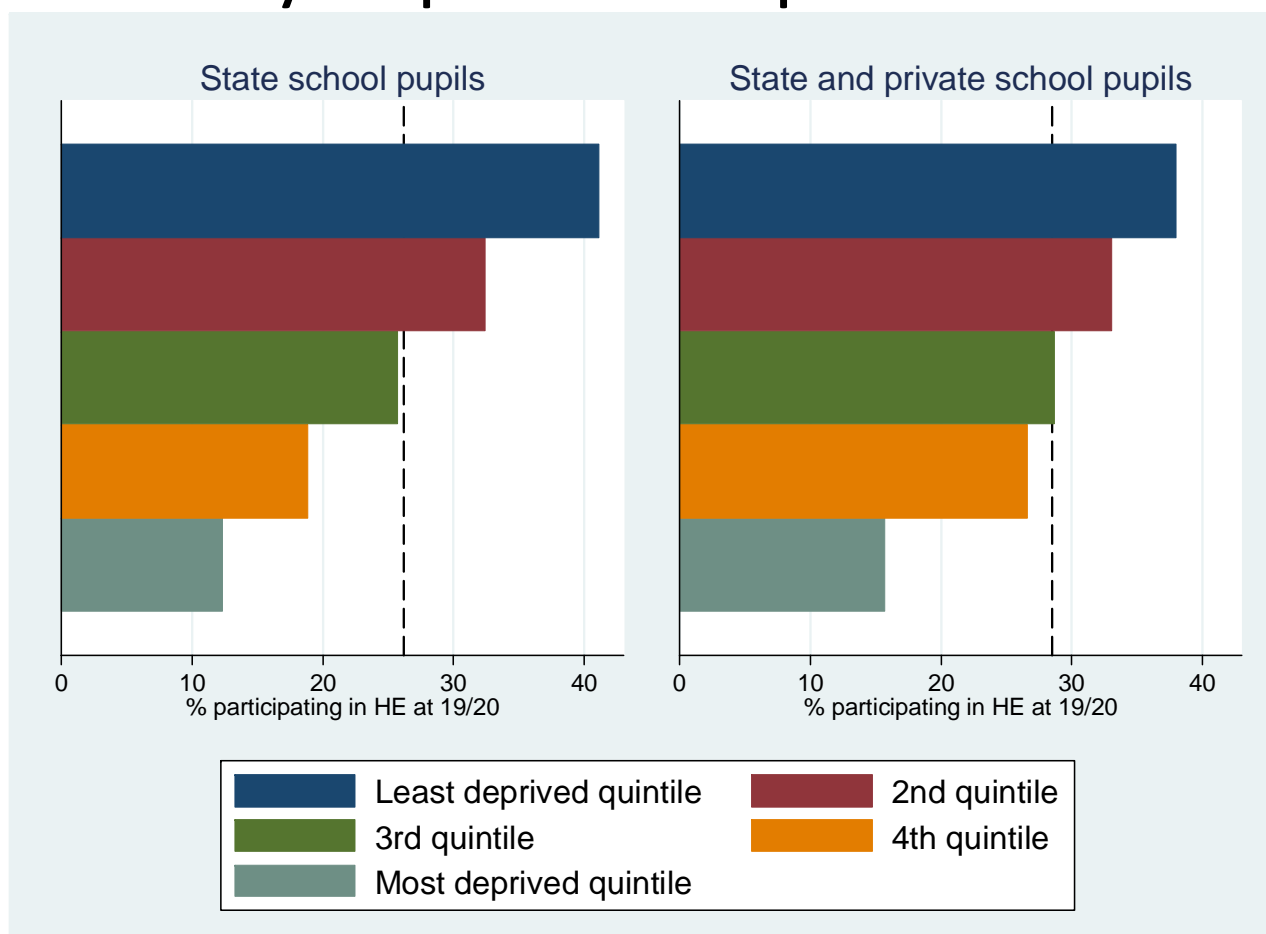
- Socio-economic gaps still emerge early and remain entrenched in the UK
- UK has higher than average socio-economic gap in education achievement compared to other similar countries
- Despite increases in education expenditure the socio-economic gap has remained large

Blanden, Gregg and Machin, 2005; Blanden and Machin, 2008, Chowdry et al. 2008, Feinstein, 2003; George et al. 2007; Goodman and Gregg, 2009.

Inequality best illustrated by looking at HE

- Likelihood of HE participation varies massively by socio-economic background
- However much of this gap can be explained by prior achievement
- Again comes back to early interventions and investments..... If we are serious about equity issues...

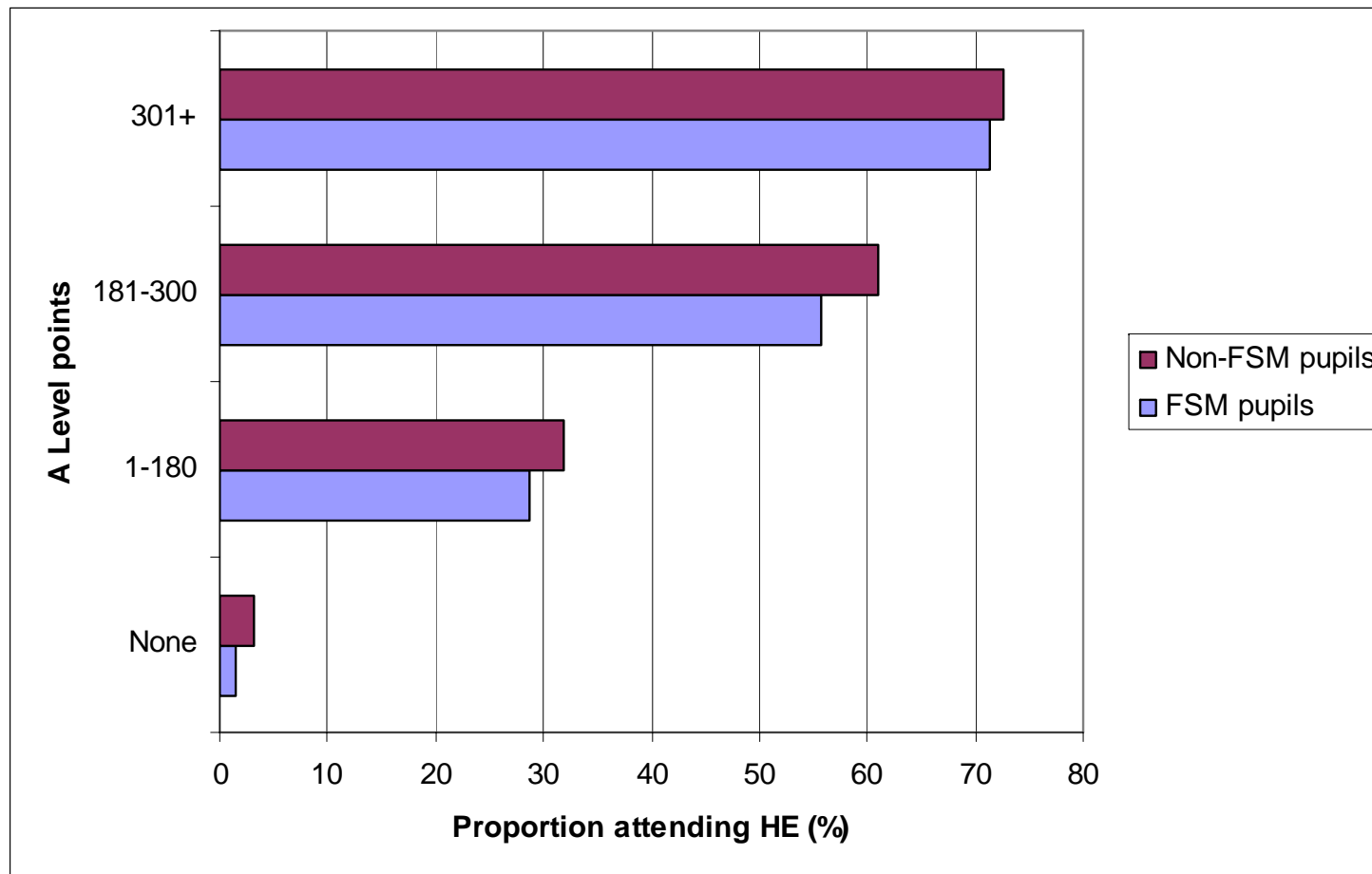
Male HE participation, by deprivation quintile



Understanding inequality in HE participation

- Very large raw differences in HE participation rates by socio-economic background
- Disparity all but disappears once we allow for prior attainment

Allowing for prior achievement:



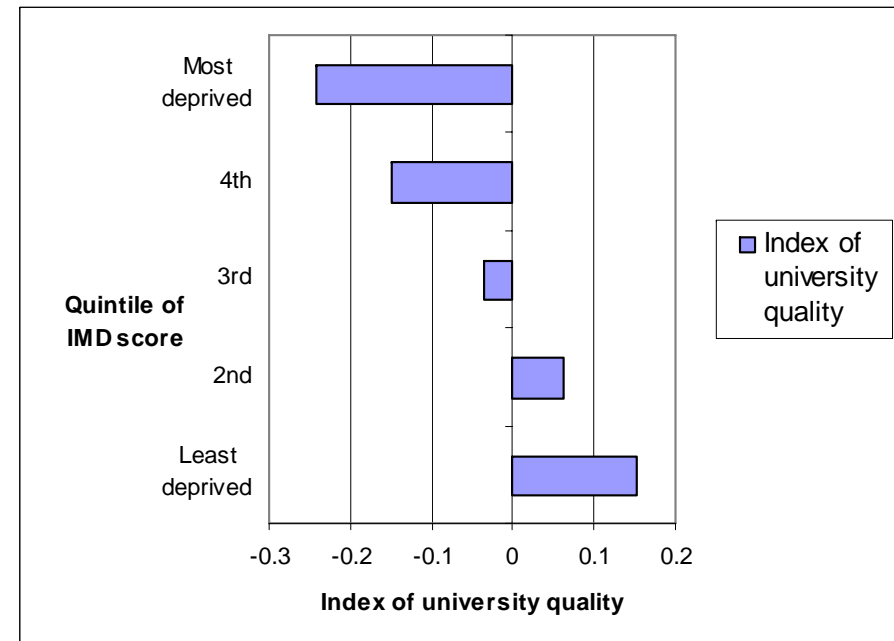
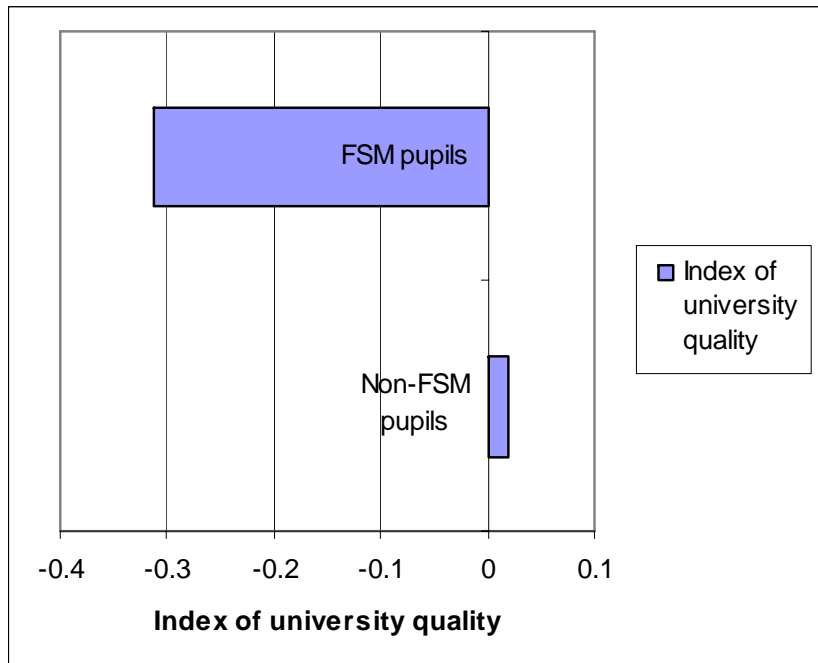
Key Finding

- Once we allow for prior achievement, poorer and richer students have similar HE participation rates.
- If disadvantaged pupils improve in secondary, they are as likely to participate in HE as their advantaged counterparts

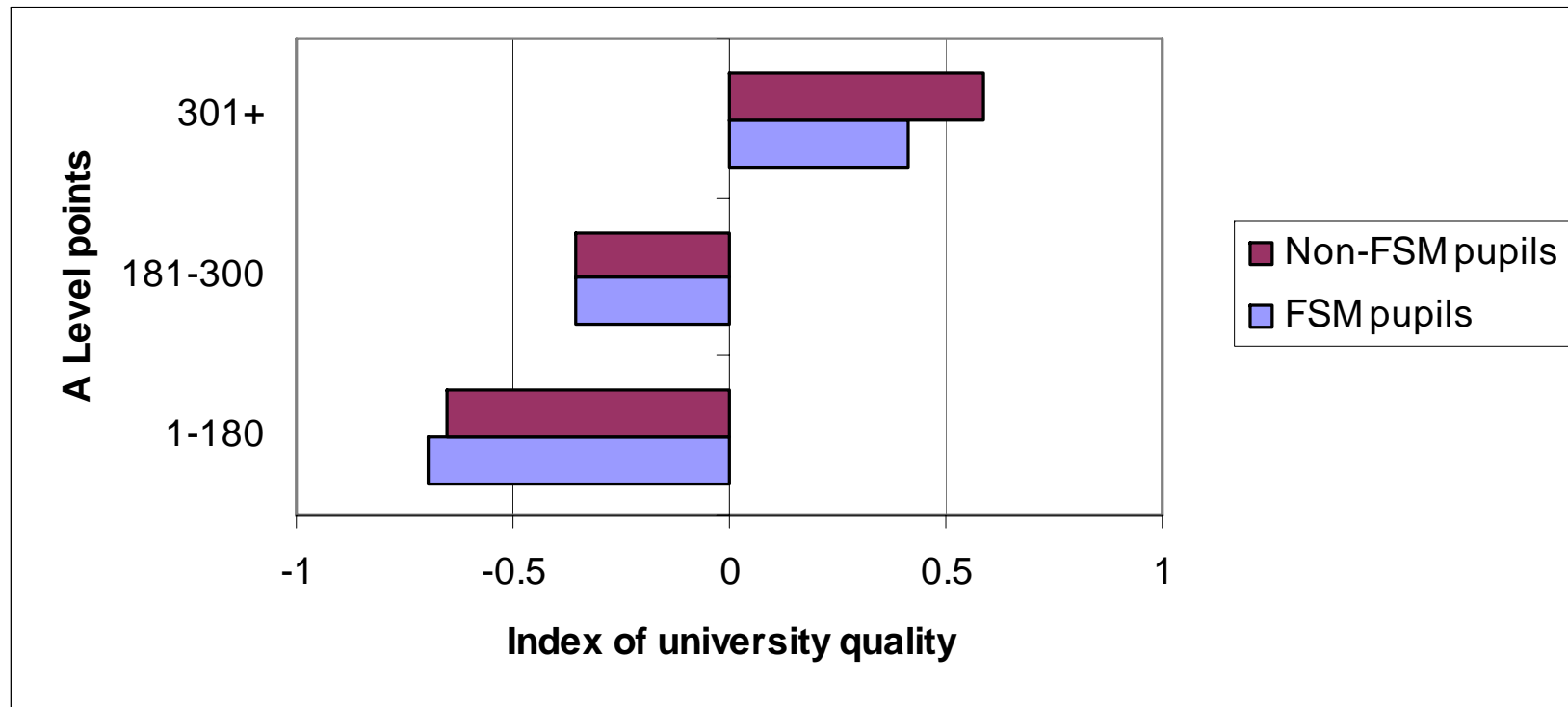
Also about the quality of HE

- There is also inequality in the types of universities attended by different students
- Poorer students tend to enrol in less prestigious universities

Strong gradient in university prestige by deprivation status



Differences in HE prestige within A Level scores



Results

- Again, if we allow for prior achievement only a modest socio-economic gap in participation remains
- Reducing inequality in higher education participation in the UK is all about reducing inequalities earlier in the system

Policy Implications

- Early intervention needed
 - In UK 40% increase in primary expenditure since 97
 - positive impact on achievement
 - Machin et al. 2007
- Family intervention needed
 - intergenerational persistence of attitudes and aspirations
 - parenting programmes introduced
 - Goodman and Gregg, 2009

Policy Implications

- Cannot only intervene early and ignore adults
- But cognitive skills less malleable later in life
- State interventions for adults often poor quality and target driven

Cunha and Heckman 2008; Dearden et al. 2006; NAO, 2008;
Leitch, 2006; Hogarth, Bosworth et al. 2009

Policy Implications

- Recognise that increasing participation will not automatically mean rising skill levels nor improved equity
- Early and family focused interventions are needed if we are to break the inter-generational cycle and improve equity