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*INCOME INEQUALITY
SOCIAL MOBILITY
AND ECONOMIC GROWTH**

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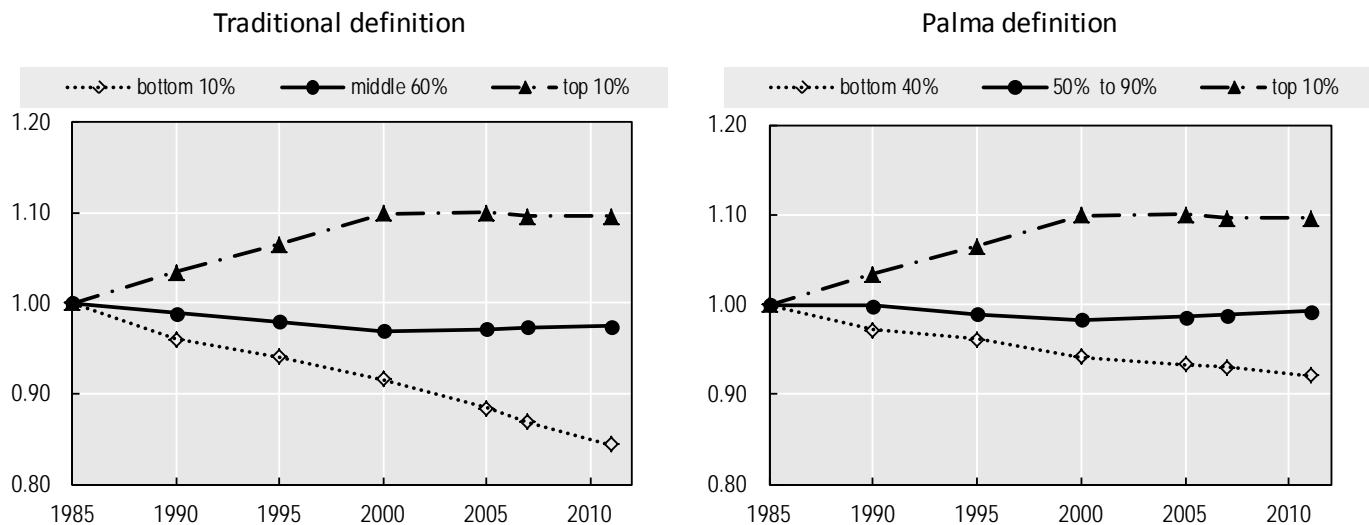
*Source: OECD (2015) [*In It Together: Why less inequality benefits all*](#) OECD Publishing, Paris



OECD work on income distribution ...

- Long-standing interest in data collection and analysis
 - Early works → mid 1970s; regular data collection → mid 1990s
- Documented the (increasing) patterns of income inequality across MCs in many publications
 - Latest one warns: “The gap between rich and poor is at its highest level since 30 years”

Shares of bottom, middle and top incomes in total income, OECD average 1985 to 2011/12, 1985 = 1



Source: OECD Income Distribution Database (www.oecd.org/social/inequality.htm).

Note: Income refers to cash disposable income adjusted for household size.



... contributed to a growing public discussion

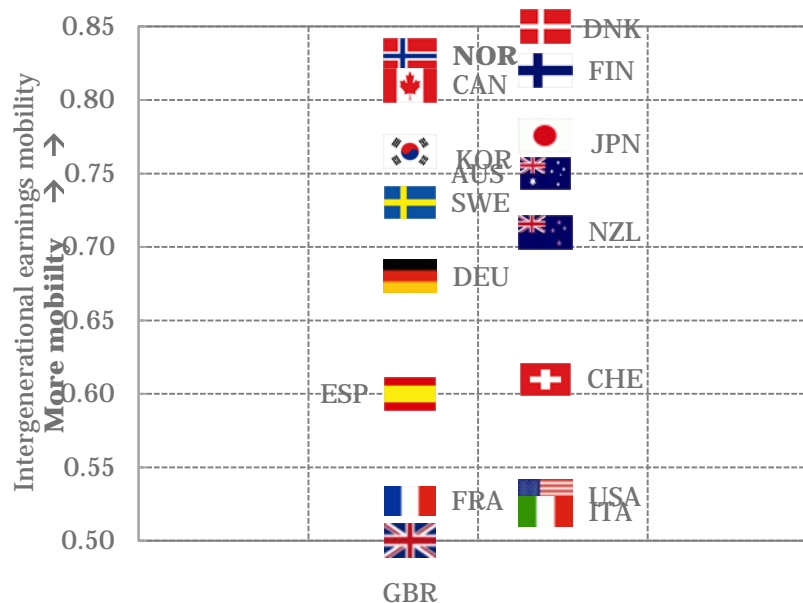
- Rising concerns about the potential impact of these trends on our societies ...
 - Is increasing inequality compatible with social cohesion and political stability?
- ... and economies:
 - Does it imply lower **social mobility**?
 - Does it affect **economic growth** (recovery)?
- To a large extent, the answers depend on the impact of inequality on (human and physical capital) investment, on entrepreneurship and innovation etc.
 - **Incentives vs Opportunities**



Inequality & mobility: what do we know?

Social mobility varies substantially across OECD countries...

- Children education (or income) depends on parents' education (or income) → intergenerational persistence in outcomes



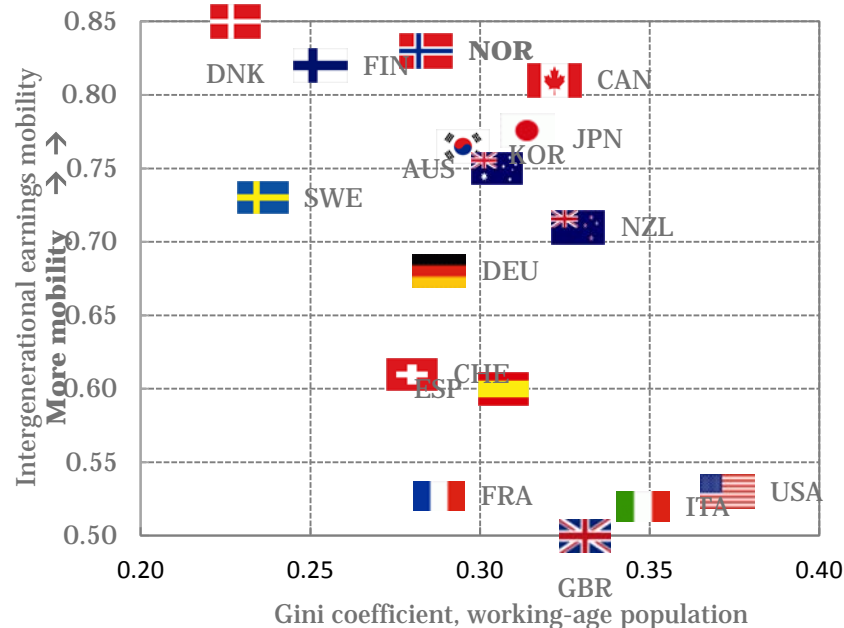
Note: The chart plots estimates of social mobility (= 1 - the intergenerational earnings elasticity). A higher number means more mobility. A value of 0.85 (= 1 - 0.15) in DNK means that if an individual earns 10,000€ less income than average, the children will earn 1,500€ less than average (as opposed to 5,000€ less than average in the UK). Source: OECD calculations from different sources



Inequality & mobility: what do we know?

... and it is negatively correlated with inequality (the “GCC”)

- Intergenerational persistence in outcomes increases with outcome (income) disparities



Note: estimates of social mobility (1 - the intergenerational earnings elasticity) against (Gini) inequality. Both indicators increase with inequality and mobility. Source: OECD calculations from different sources



Inequality & mobility: what do we know?

Does this imply that increasing inequality would lower mobility?

- Difficult to argue from cross country correlations
 - inequality might correlate with the quality of the educational system, or with other policies and institutions that affect outcomes
- Aggregate evidence (the GCC) is silent on the underlying mechanisms
 - is it due in particular to underinvestment by the poor?



Recent OECD evidence on inequality & (educational) mobility

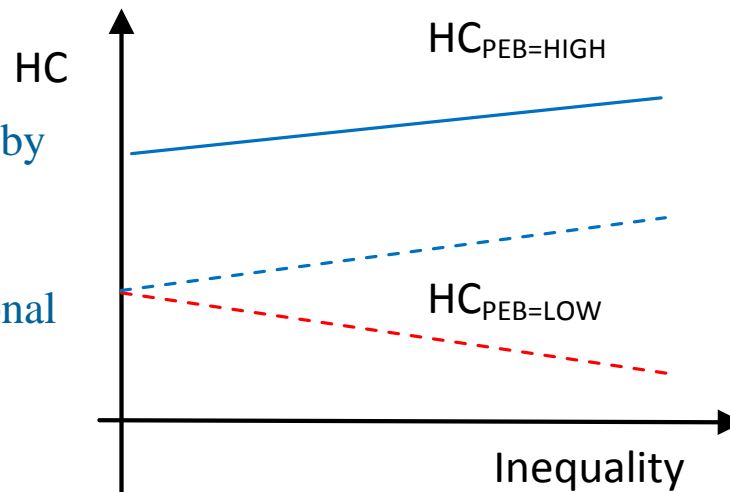
Look at the consequences of inequality on attainments by individuals with different parent educational background (PEB)

$$HC_{i,t,c} = \beta_1 PEB_{i,t,c} + \beta_2 PEB_{i,t,c} * Ineq_{t,c} + \mu_c + \mu_t + \epsilon_{i,t,c}$$

β_1 captures average educational outcomes by PEB (the intercepts).

A measure of educational mobility

PIAAC Data



β_2 measures how such averages (mobility) vary with inequality (the slopes)

Estimates exploit within country variation (μ_c accounts for fixed country characteristics)

HC: human capital (individual *i*, in country *c*, age cohort *t*)

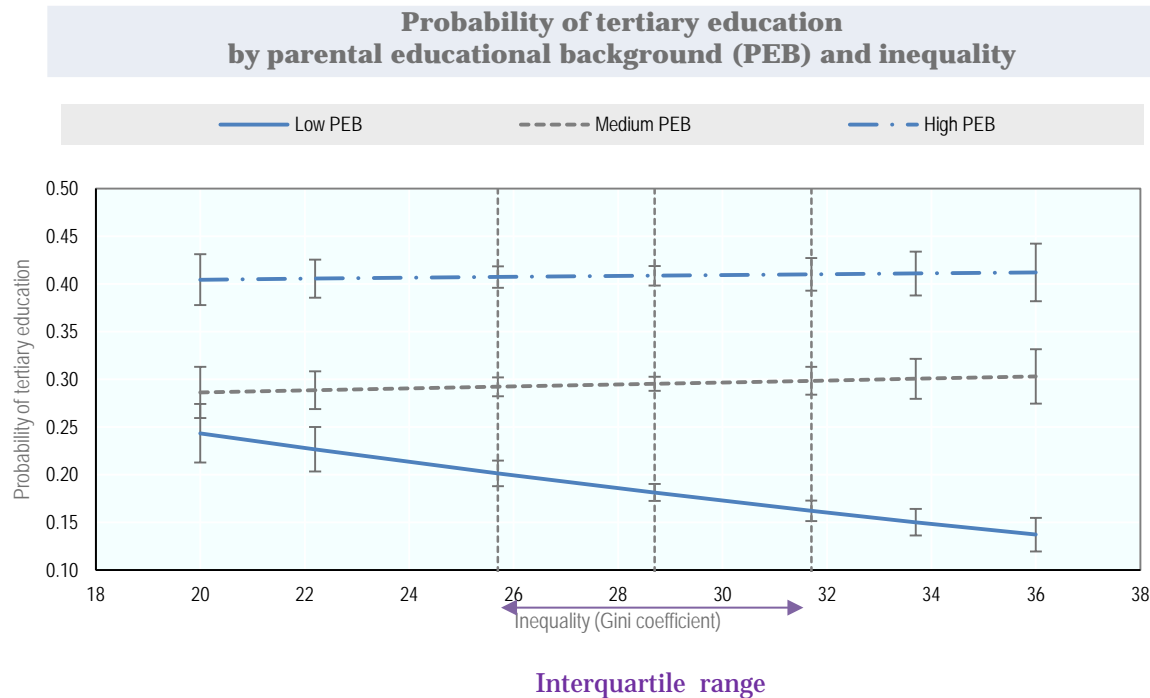
PEB: index for parents education being low, medium or high

Ineq: inequality in *c*, measured when *i* was 14 yrs old



The role of inequality and family background for formal education (i)

Inequality lowers the probability of Tertiary education, but only among individuals with low parental education ...



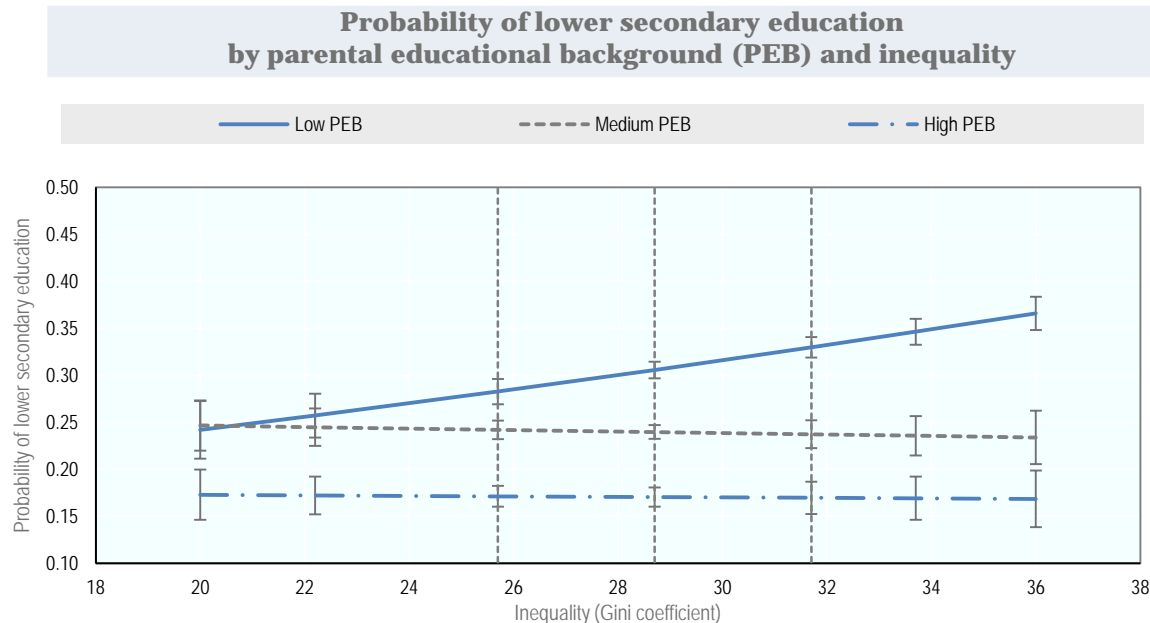
A 6 Gini pts. increase in inequality (the US-Canada differential in 2010) is associated to 4 ppts. lower probability of tertiary education of Low PEB individuals

Note: Low PEB: neither parent has attained upper secondary education; Medium PEB: at least one parent has attained secondary and post-secondary, non-tertiary education; High PEB: at least one parent has attained tertiary education. The bars indicate 95% confidence intervals. Source: OECD (2015) *In It Together: Why less inequality benefits all* OECD Publishing, Paris. <http://dx.doi.org/10.1787/9789264235120-en>



The role of inequality and family background for formal education (ii)

... while increasing their probability of (at most) lower secondary education



A 6 Gini pts. increase in inequality is associated to a ~5 pts higher probability that Low PEB individuals attain at most lower secondary education

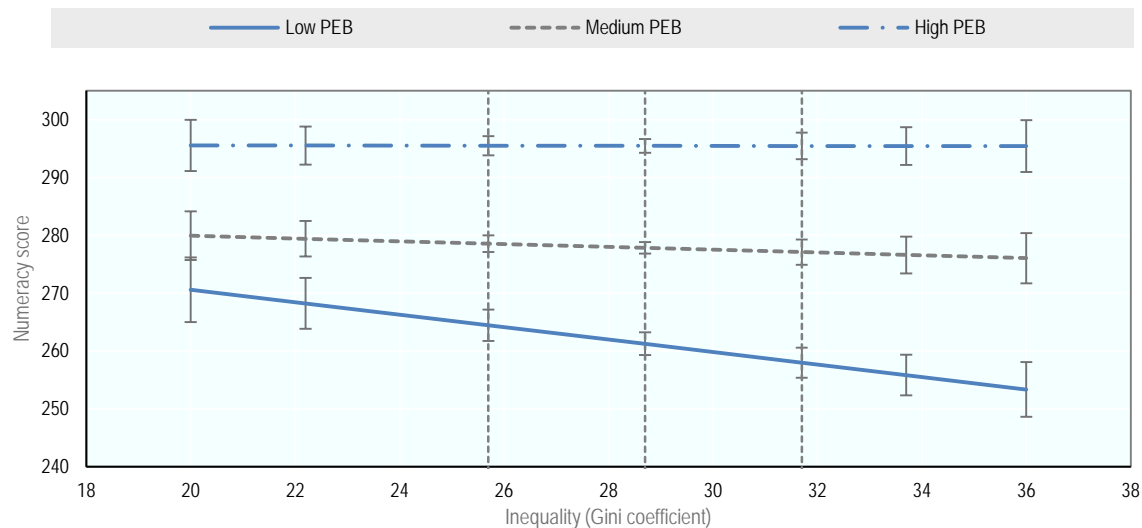
Note: Low PEB: neither parent has attained upper secondary education; Medium PEB: at least one parent has attained secondary and post-secondary, non-tertiary education; High PEB: at least one parent has attained tertiary education. The bars indicate 95% confidence intervals.



The role of inequality and family background for skill proficiency (i)

Inequality lowers (literacy and numeracy) skills, but only among individuals with low parental education

Average PIAAC numeracy score by parental educational background (PEB) and inequality



A 6 Gini pts. increase in inequality is associated to lower Numeracy score (by ~6 pts) by low PEB individuals (35% of the baseline differential relative to Med PEB)

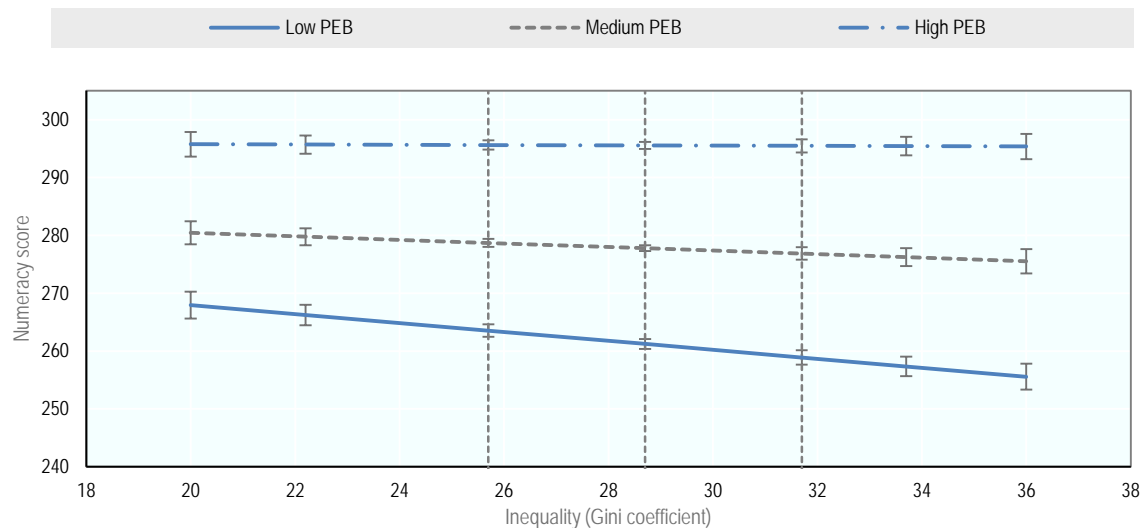
Note: Low PEB: neither parent has attained upper secondary education; Medium PEB: at least one parent has attained secondary and post-secondary, non-tertiary education; High PEB: at least one parent has attained tertiary education. The bars indicate 95% confidence intervals.



The role of inequality and family background for skill proficiency (ii)

Inequality lowers skill proficiency of low PEB individuals, even conditioning on the level of formal education

Average PIAAC numeracy score conditional on education by parental educational background (PEB) and inequality



A 6 Gini pts. increase in inequality is associated to lower Numeracy score (by ~5 pts) by low PEB individuals

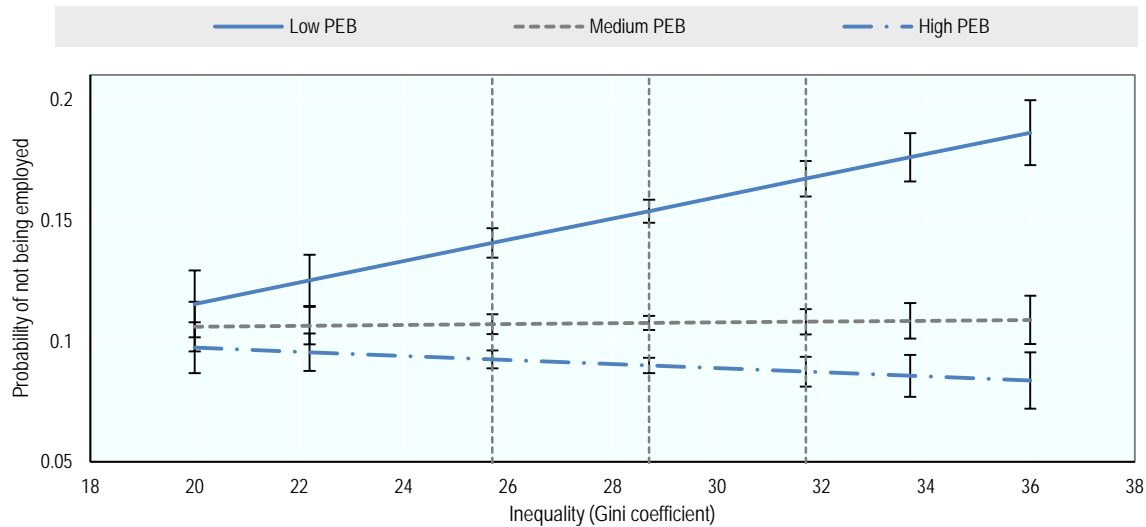
Note: Low PEB: neither parent has attained upper secondary education; Medium PEB: at least one parent has attained secondary and post-secondary, non-tertiary education; High PEB: at least one parent has attained tertiary education. The bars indicate 95% confidence intervals.



The role of inequality and family background for labour market outcomes

Inequality increases the probability that low PEB individuals are *not* employed over their working life

Fraction of working life spent out of employment by parental educational background (PEB) and inequality



A 6 Gini pts. increase in inequality is associated to an increase in this probability by 3 ppts

Note: Low PEB: neither parent has attained upper secondary education; Medium PEB: at least one parent has attained secondary and post-secondary, non-tertiary education; High PEB: at least one parent has attained tertiary education. The bars indicate 95% confidence intervals.



Inequality & growth: what do we know?

- Huge literature started in 1990s. Mostly focused on reduced-form growth regressions
- Largely inconclusive:
 - Early (cross-country) works: mostly negative estimates
 - Later (panel) analyses: often positive (or non-significant) estimates
- Possible explanations:
 - Data quality and their coverage
 - Estimation approaches and inequality indicators
- Recent research based on OECD data shows that when income inequality rises economic growth falls



Recent OECD evidence on Inequality & growth

- Looking across OECD countries (1970-2010) the effect is significantly negative
 - Increasing income inequality by 1 Gini pt. lowers the growth rate of GDP per capita by ~ 0.12 pp per year, with a cumulative loss of $\sim 3\%$ after 25 years.
- Result is driven by disparities at the *bottom* of the distribution
 - The negative effect is not just for the poorest income decile but involves the lower middle classes (the bottom 40%). Top inequality is less, if any, relevant for growth



Conclusions

- In general, policies that help to limit or reverse inequality may not only make societies less unfair, but also wealthier.
- Which does *not* imply that *any* redistributive policy would work.
- (from this and other works) measures that might help create greater equality of opportunities & growth in the long run include:
 - Promoting access to education, particularly for students from disadvantaged backgrounds.
 - Improving job-related training and education, and access to formal education over the working life
 - Facilitating access to jobs (and career prospects) for under-represented groups (youth, women)