



Do poor children become poor adults? Lessons for public policy from a cross country comparison of generational earnings mobility

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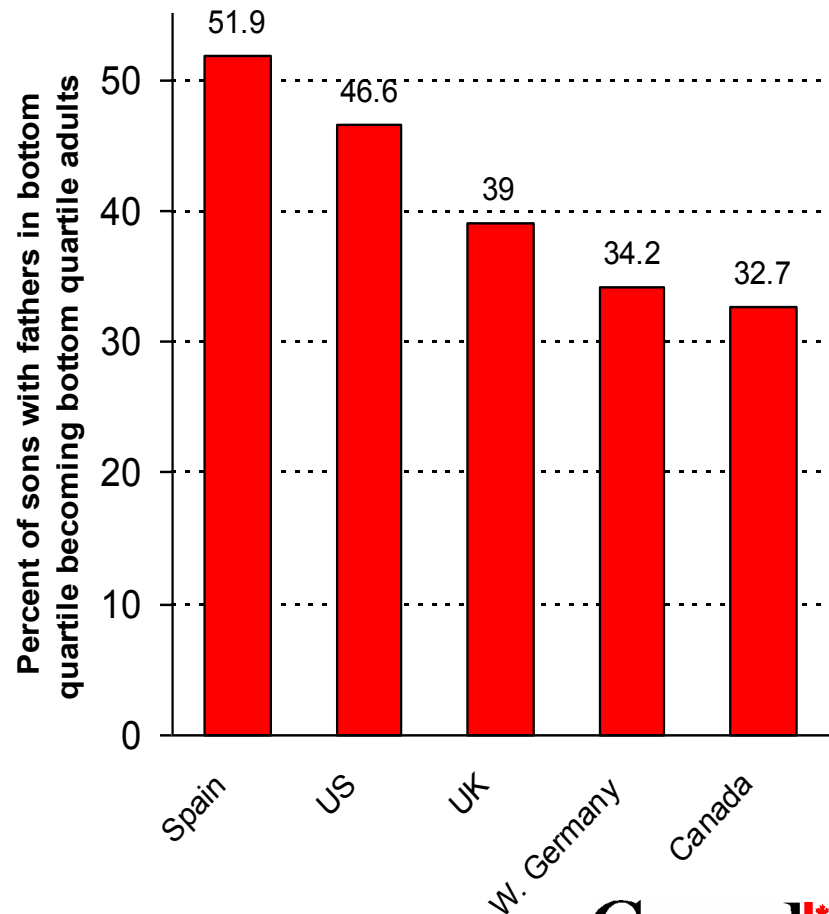
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Generational cycles of low income are common in rich countries

More than one-third of sons born to low income fathers become low income adults in many of the rich countries.

The pattern in the Nordic countries also suggests that a disproportionate fraction of low income children grow up to be poor adults.

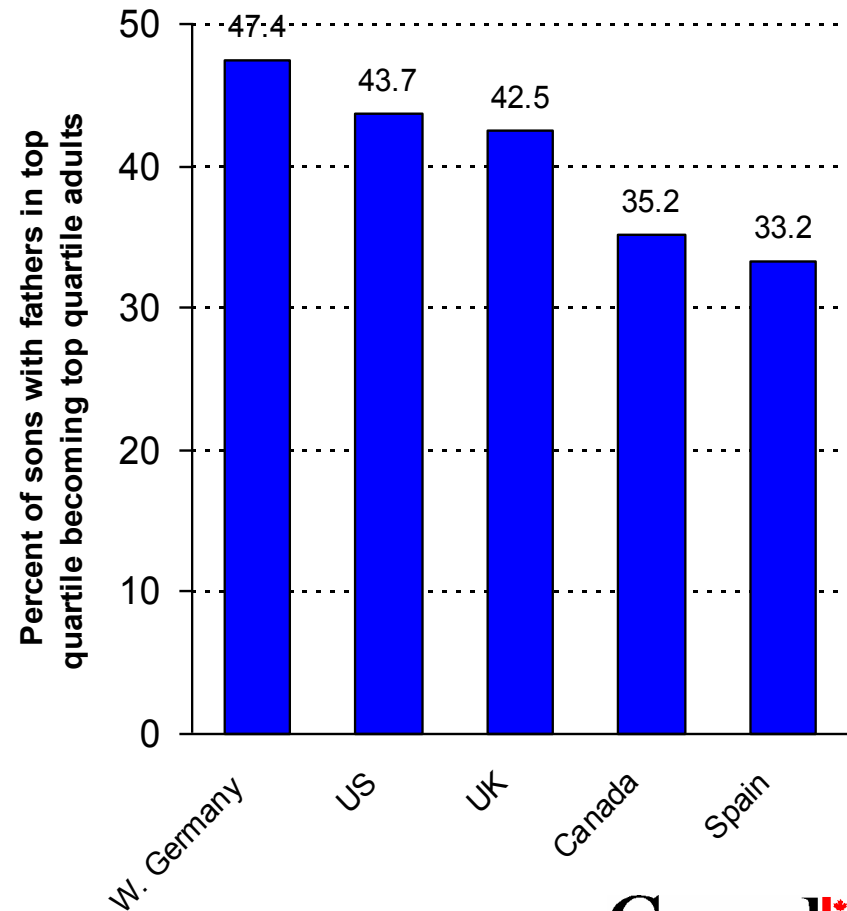




... and so are generational cycles of high income

Over 40% of sons born to high income fathers become high income adults in West Germany, the US and the UK, about a third do so in Canada and Spain.

Similar patterns exist in the Nordic countries.





Objectives

1. Illustrate a framework for thinking about generational income dynamics and present “appropriate” cross country comparisons
 - Assess a number of measurement and methodological issues that arise within this framework
2. Use these comparisons to develop lessons for public policy
 - What are the underlying causes of the degree of generational mobility, and of differences between countries?
 - What does equality of opportunity mean?





Three major findings/implications



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Three major findings/implications

1. Countries differ significantly in the extent to which parental economic status is related to the labour market success of children in adulthood.
 - The United Kingdom and the United States (and possibly France) stand at one extreme as the least generationally mobile societies
 - Canada, Finland, Norway, Denmark stand at the other extreme





Three major findings/implications

2. Underlying causes

- While money may be important to the long term labour market success of children it is not the only, or perhaps even major, key
- Rewards to higher education and opportunities for children to obtain the required credentials are important factors influencing the degree of generational mobility and differences between countries
- Income transfers may be important to low income children in the here and now, but they should not be counted on to strongly promote generational mobility





Three major findings/implications

3. The welfare state needs to focus on “investment” not just “insurance”
 - Historically this has meant promoting access to higher and higher levels of education
 - But the focus needs to shift to pre-school and early childhood education
 - This shift implies a conception of equality of opportunity that may have different degrees of support across the rich countries because it requires public policy to equalize the impact parents have on skills, beliefs, and motivation of children





A framework for thinking about generational mobility

$$Y_{i,t} = \alpha + \beta Y_{i,t-1} + \varepsilon_{i,t}$$

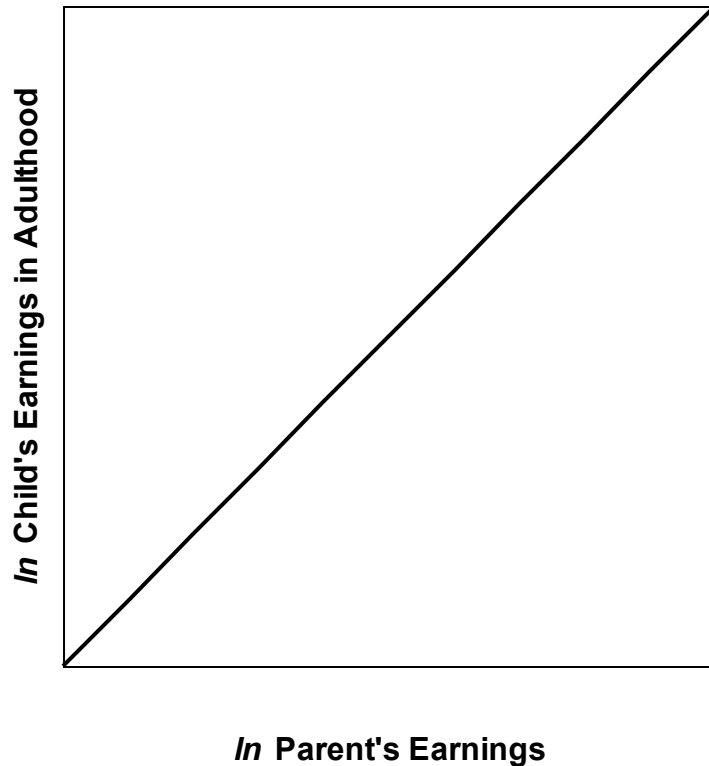
The analysis is at the individual level

- i indexes families
- t indexes generations
- Y is a labour market outcome, most commonly earnings, and usually measured in natural logarithms



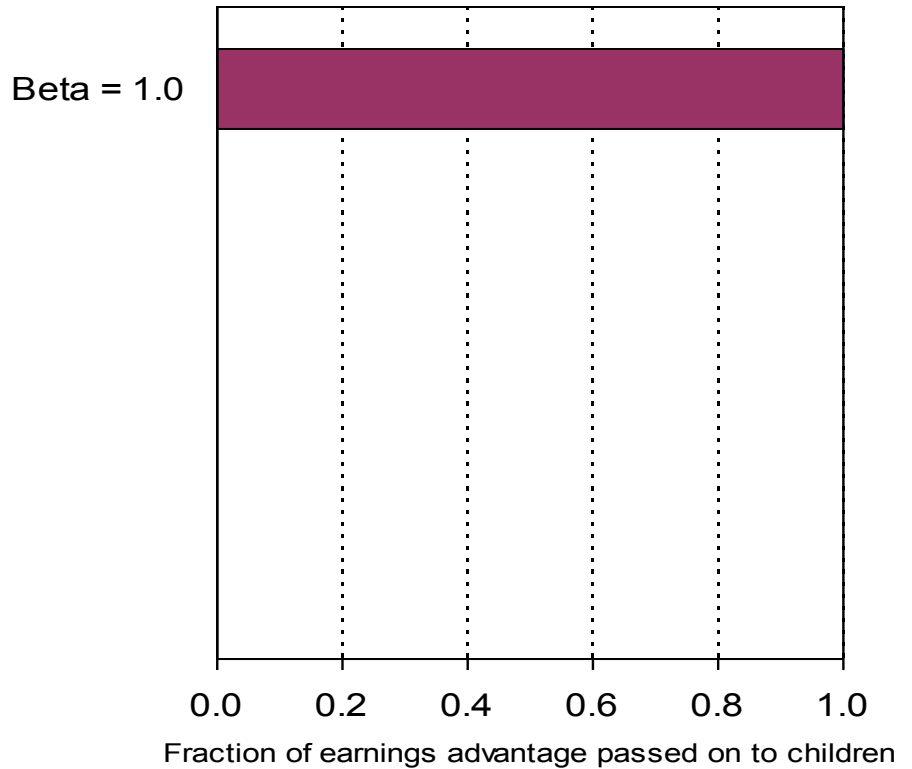
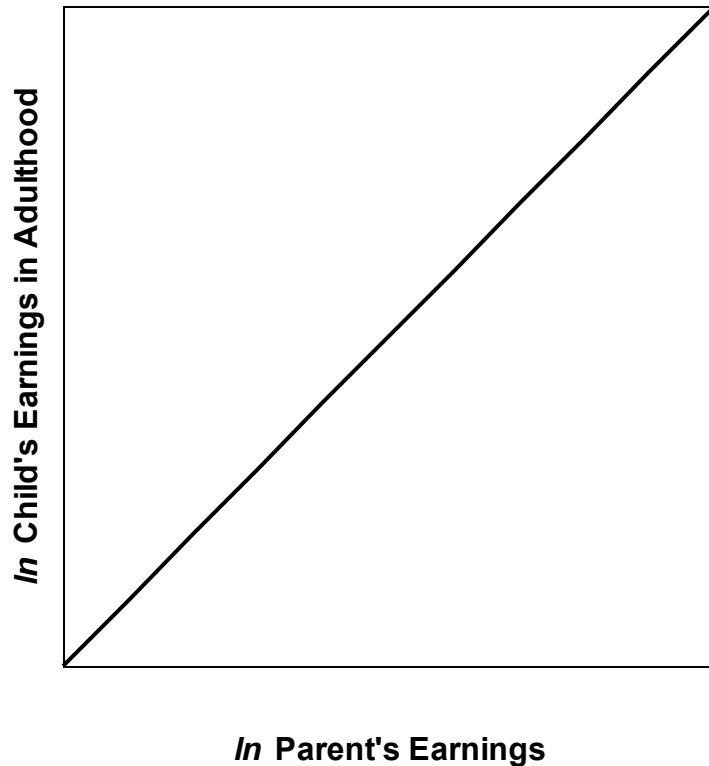


Measuring earnings mobility across the generations: $\beta=1$



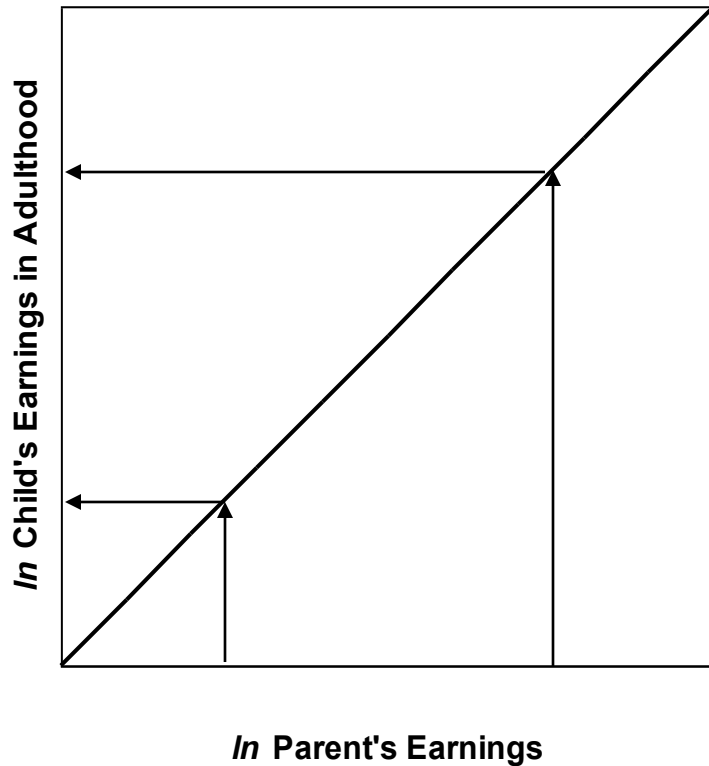


Measuring earnings mobility across the generations: $\beta=1$

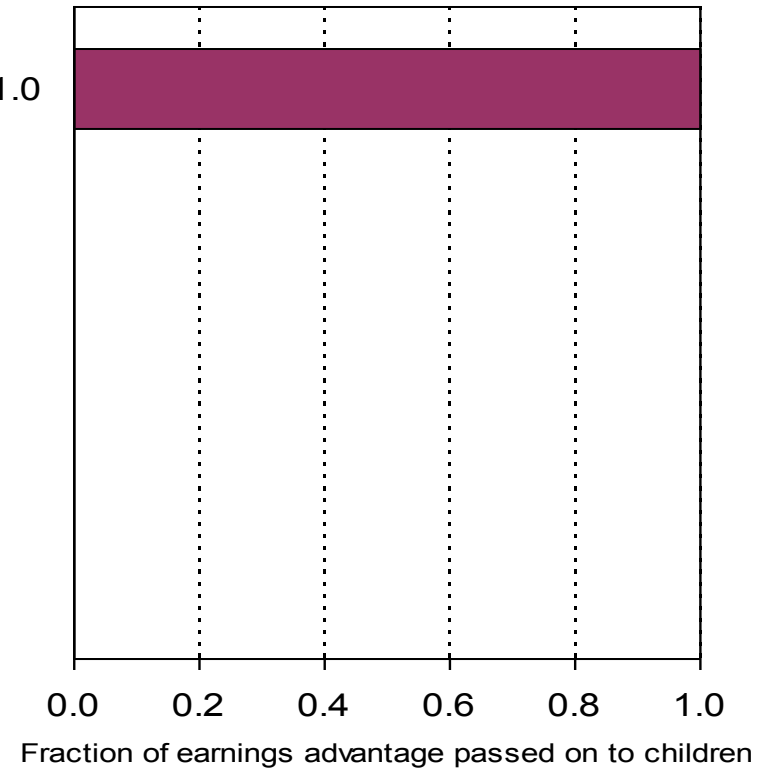




Measuring earnings mobility across the generations: $\beta=1$

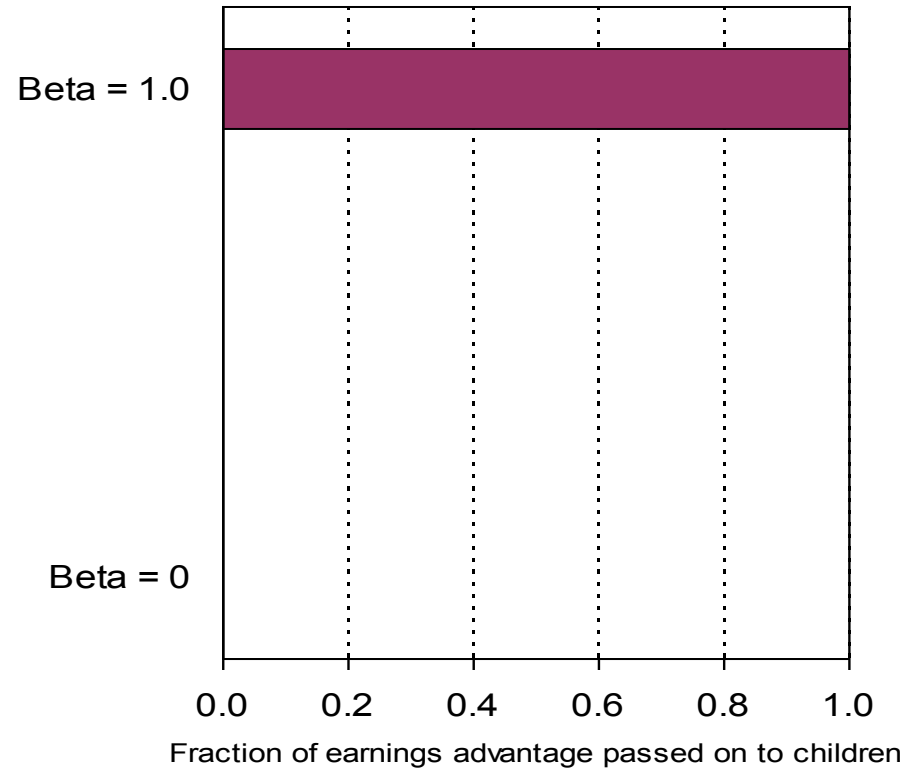
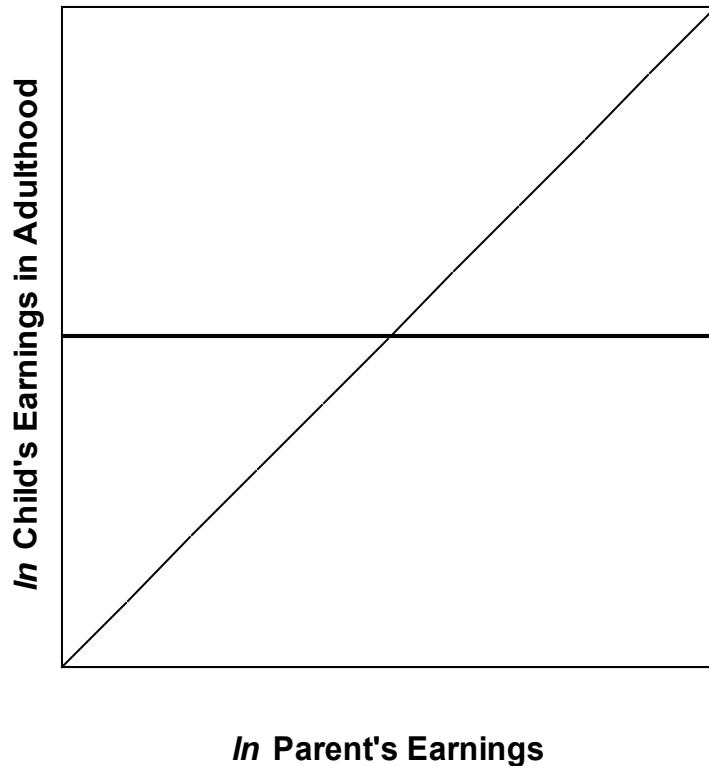


Beta = 1.0



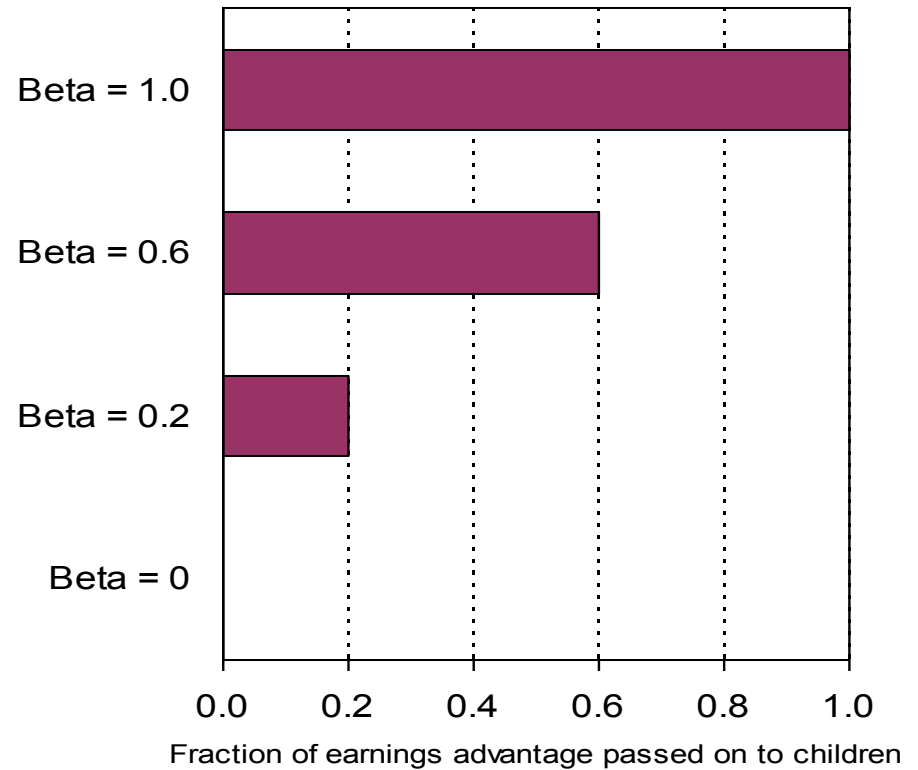
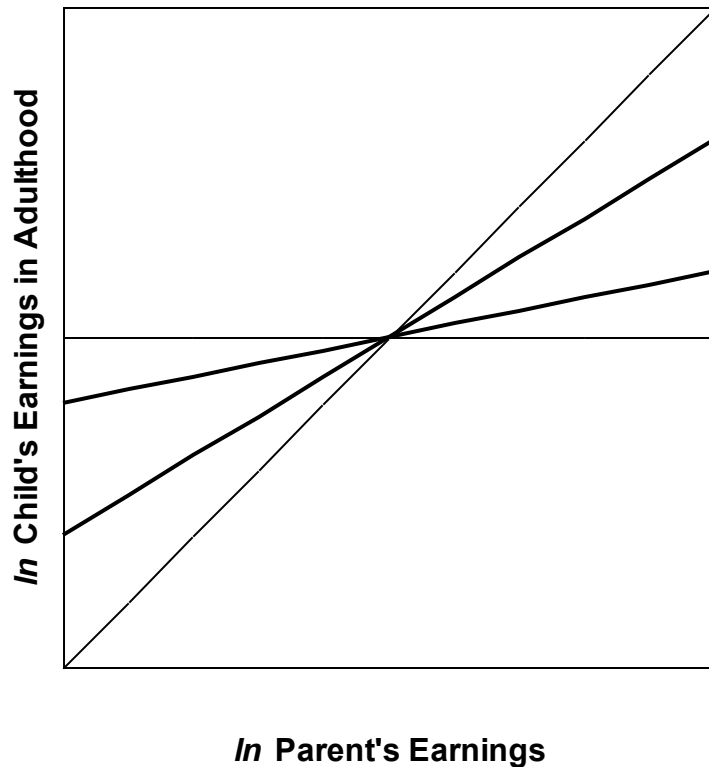


Measuring earnings mobility across the generations: $\beta=0$





Measuring earnings mobility across the generations: $\beta = 0.2$ and 0.6





β indicates the degree to which inequality is passed across generations

$$Y_{i,t} = e^{\alpha} e^{(\beta \ln Y_{i,t-1})} \quad \text{if } \varepsilon_{i,t} \text{ is ignored}$$

This implies that the ratio of earnings for children from high income (H) to low income (L) families is

$$Y_{H,t} / Y_{L,t} = (Y_{H,t-1} / Y_{L,t-1})^{\beta}$$





β indicates the degree to which
inequality is passed across generations

In the US households with children in top quintile earn 12x as much as those in the bottom quintile

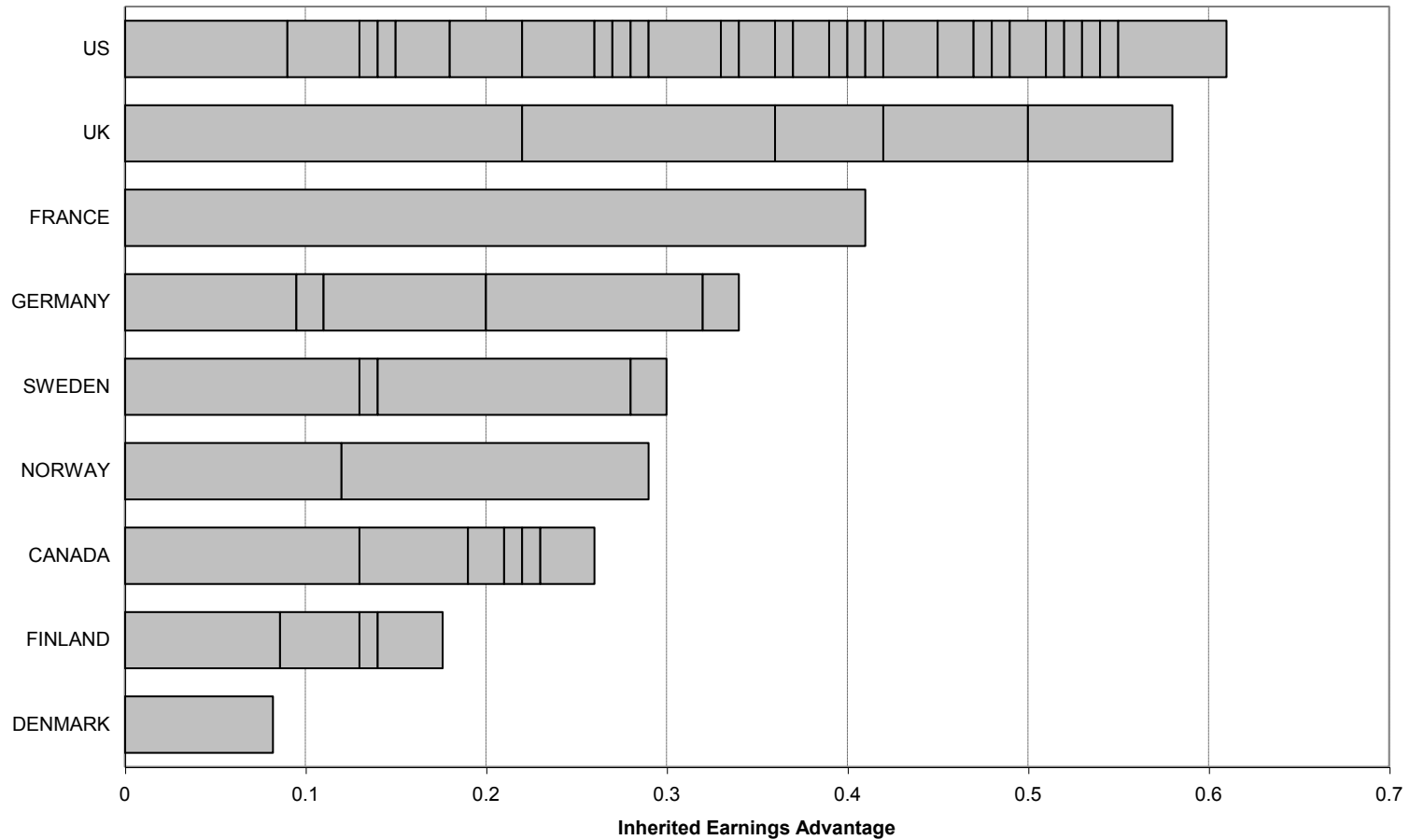
The economic advantage these high income children will have over low income children depends upon β

β	0	0.2	0.4	0.6	0.8	1.0
<i>Income Advantage</i>	1.0	1.6	2.7	4.4	7.3	12.0





Large variation across and within countries in reported generational earnings elasticities





Challenges in measuring earnings mobility across the generations



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Challenges in measuring earnings mobility across the generations

1. Representative data

- source data
- sample selection issues for analytical files

2. Measurement of income across generations and life cycles





Measurement error in permanent income leads to attenuation bias

Family investment decisions are based on permanent not annual income, and this is observable only with error so that researchers use

$$\tilde{Y}_{i,t-1} = Y_{i,t-1} + v_i \text{ implying they estimate } \tilde{\beta}$$

There is a risk of an attenuation bias with

$$\tilde{\beta} \left[1 + \sigma_v^2 / \sigma_Y^2 \right] = \beta$$





Reduce measurement error in permanent income by time averaging parental income

If T observations on parental income are taken from a representative sample during the prime working ages, and averaged so that

$$\sum Y_{i,t-1} / T$$

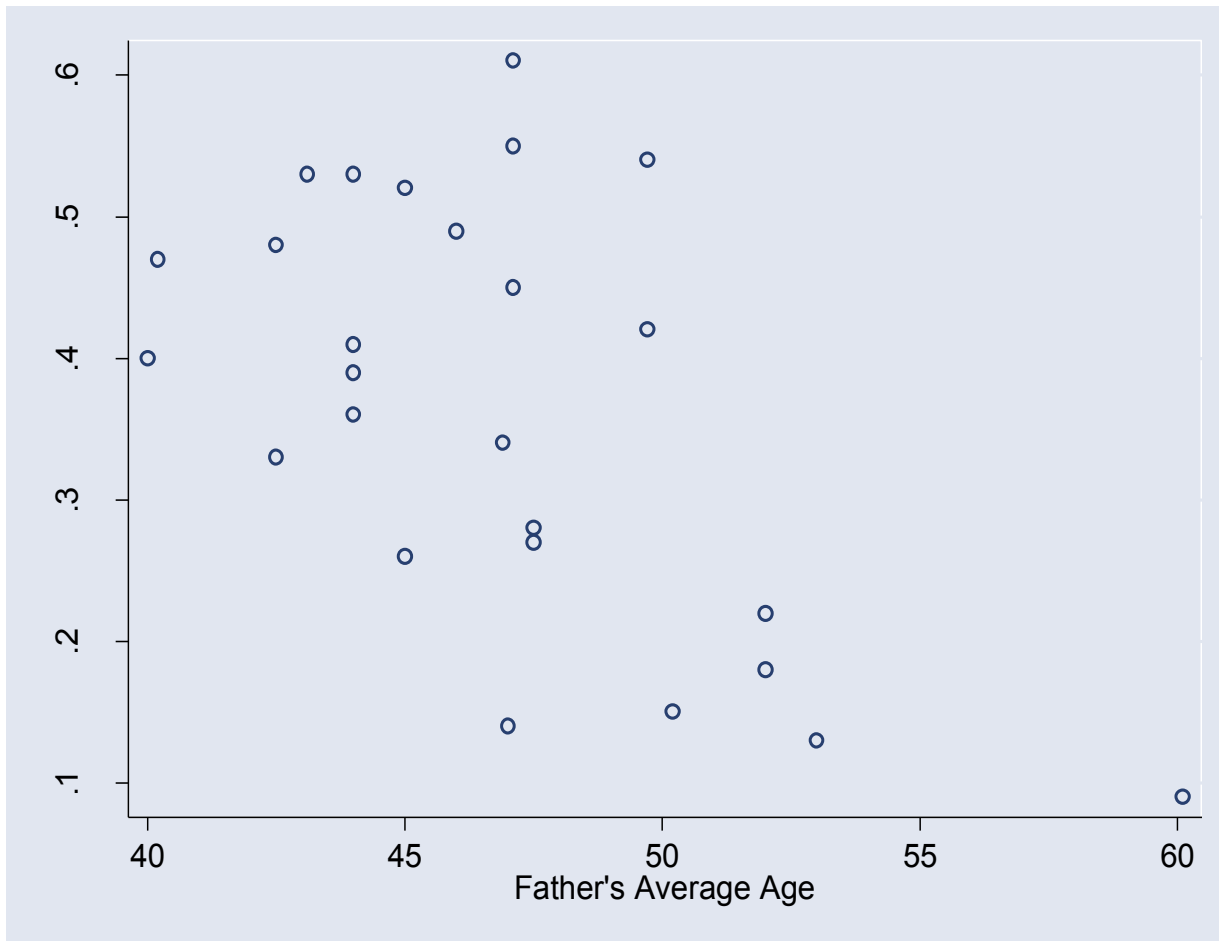
is used with least squares then

$$\tilde{\beta} \left[1 + \left(\sigma_v^2 / T \right) / \sigma_Y^2 \right] = \bar{\beta}_T \rightarrow \beta$$





Variance of earnings increases over the life cycle and exacerbates measurement errors



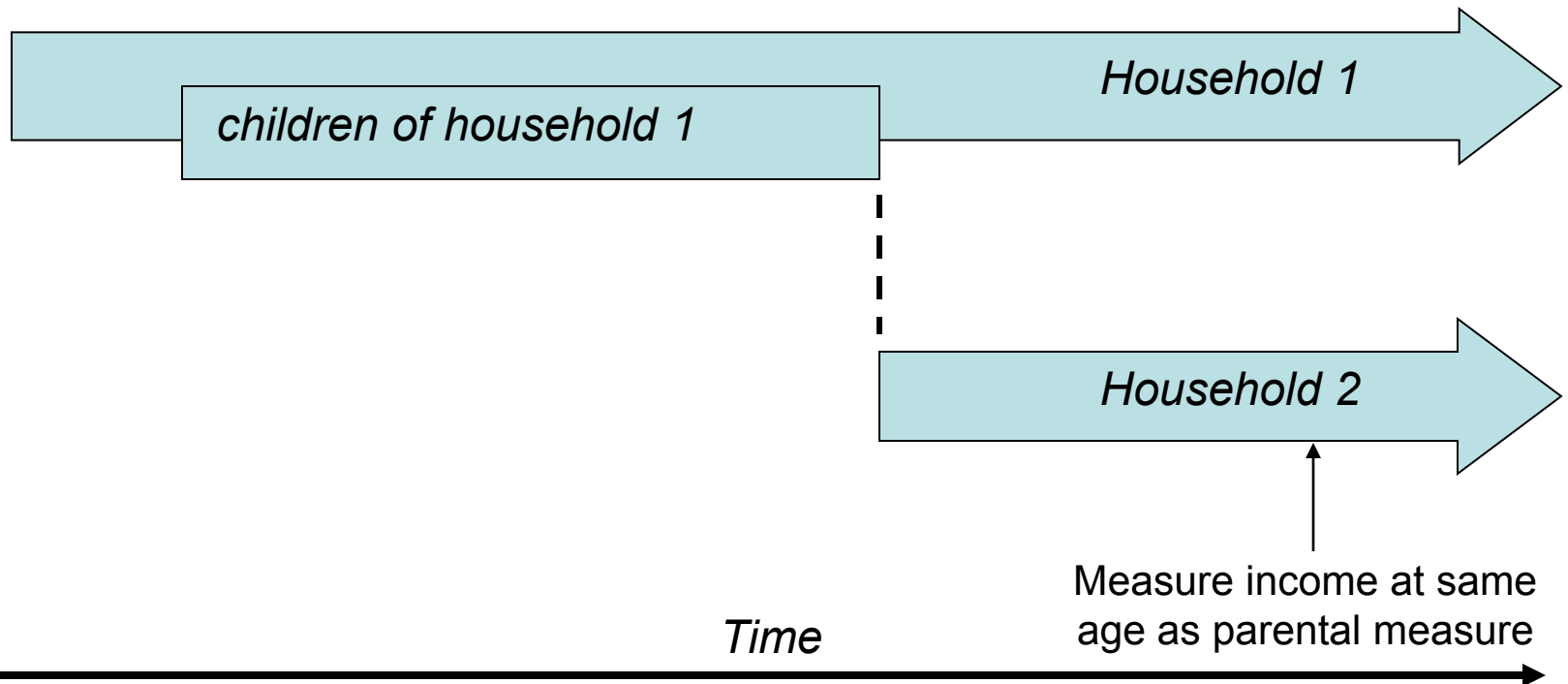
Estimates of β using US data are higher if father's are younger than 45 when observed, and lower if they are older than 50 years





The ideal information source

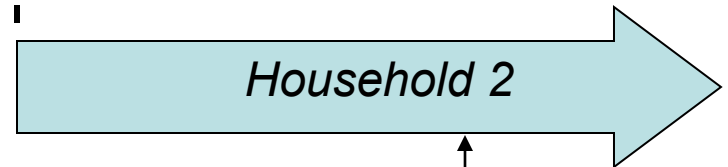
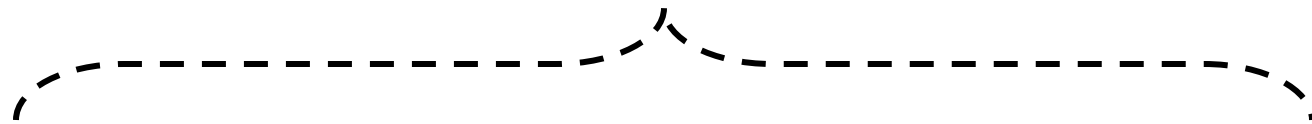
Measure income for T years during
the prime working age of parents





The ideal information source

Measure income for T years during
the prime working age of parents



Measure income at same
age as parental measure

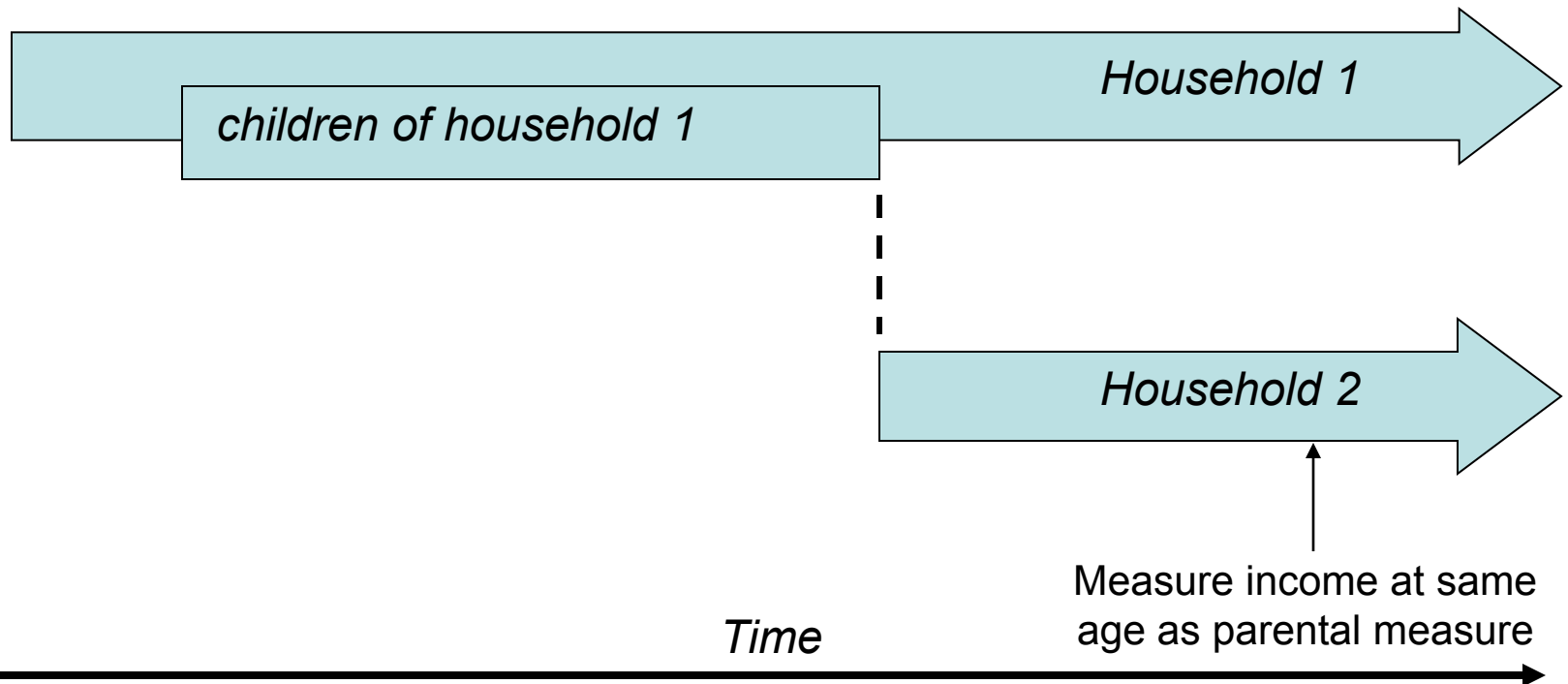
Time





The ideal information source

Measure income for T years during
the prime working age of parents



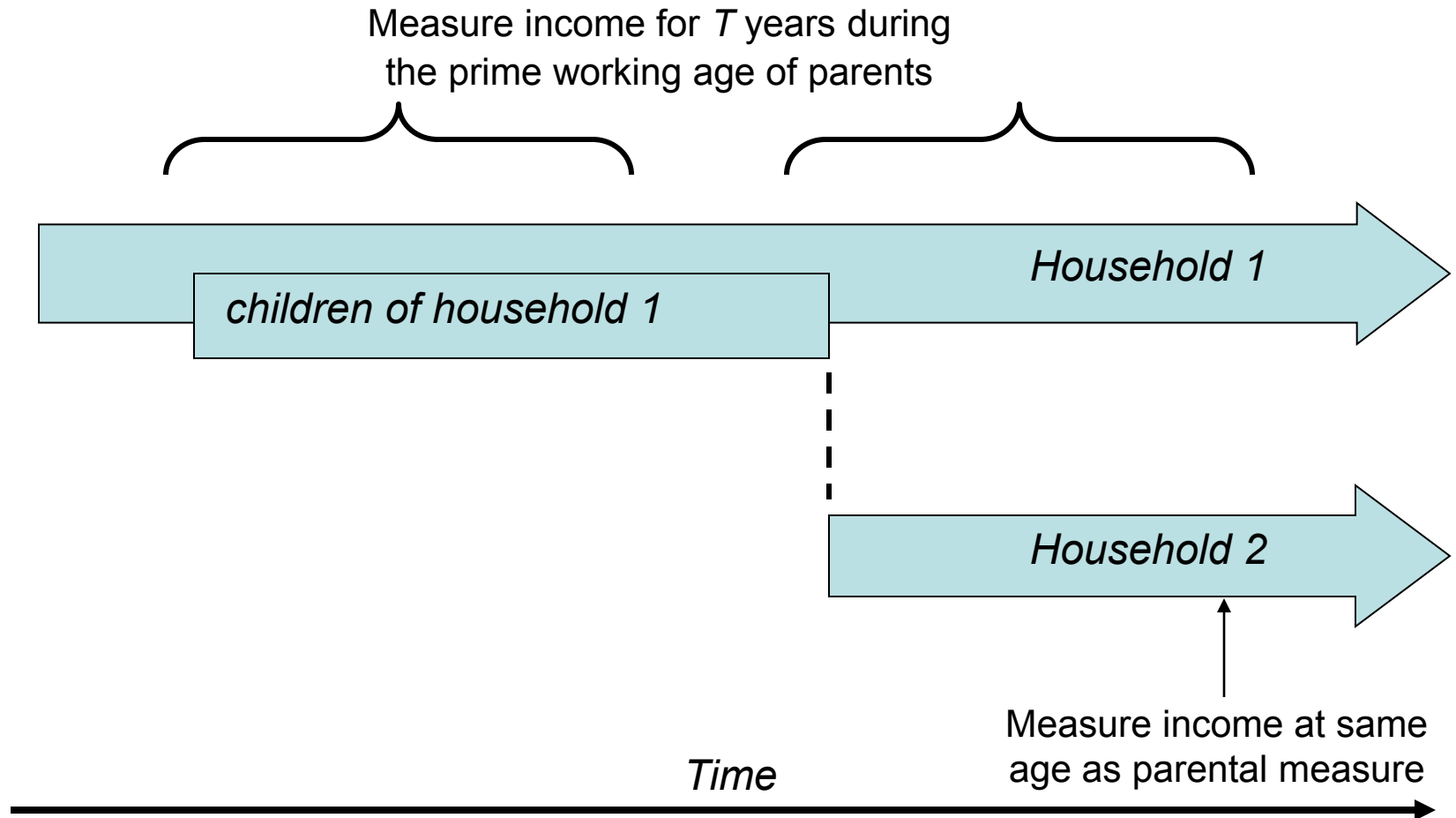
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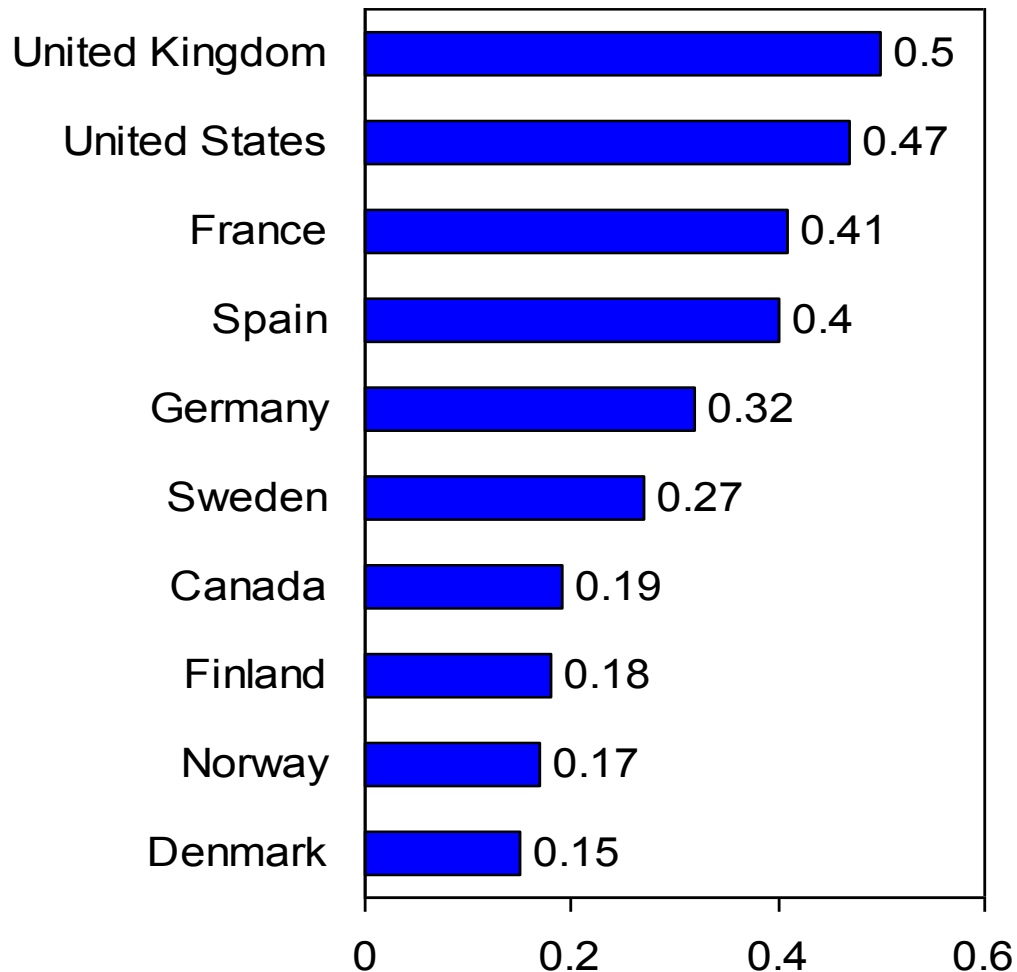


The ideal information source





Cross country comparisons of the degree of generational earnings mobility



Countries differ in the extent to which family economic status is related to labour market success of children in adulthood

More than 40% of a father's earnings advantage is passed on to sons in France, the US and UK, less than 20% in Canada, Finland, Norway and Denmark





Does equality of opportunity mean $\beta = 0$ is an appropriate goal for policy?



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Does equality of opportunity mean $\beta = 0$ is an appropriate goal for policy?

Equality of opportunity means that inequities of outcome are not defensible when they are the result of different 'circumstances'



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Does equality of opportunity mean $\beta = 0$ is an appropriate goal for policy?

Equality of opportunity means that inequities of outcome are not defensible when they are the result of different 'circumstances'

Three successively broader fields that policy makers could seek to level

1. ***Eliminate the influence of social connections and family income facilitating access to education and jobs***
2. ***Eliminate the influence of parental investments (time and money) that develop skills, beliefs, and motivation among children***
3. ***Eliminate the genetic transmission of ability***





Differences in 'rewards' and 'opportunities' explain differences in the degree of mobility between countries

Becker-Tomes framework as extended by Solon recognizes families, markets, and public policy interact to determine child outcomes

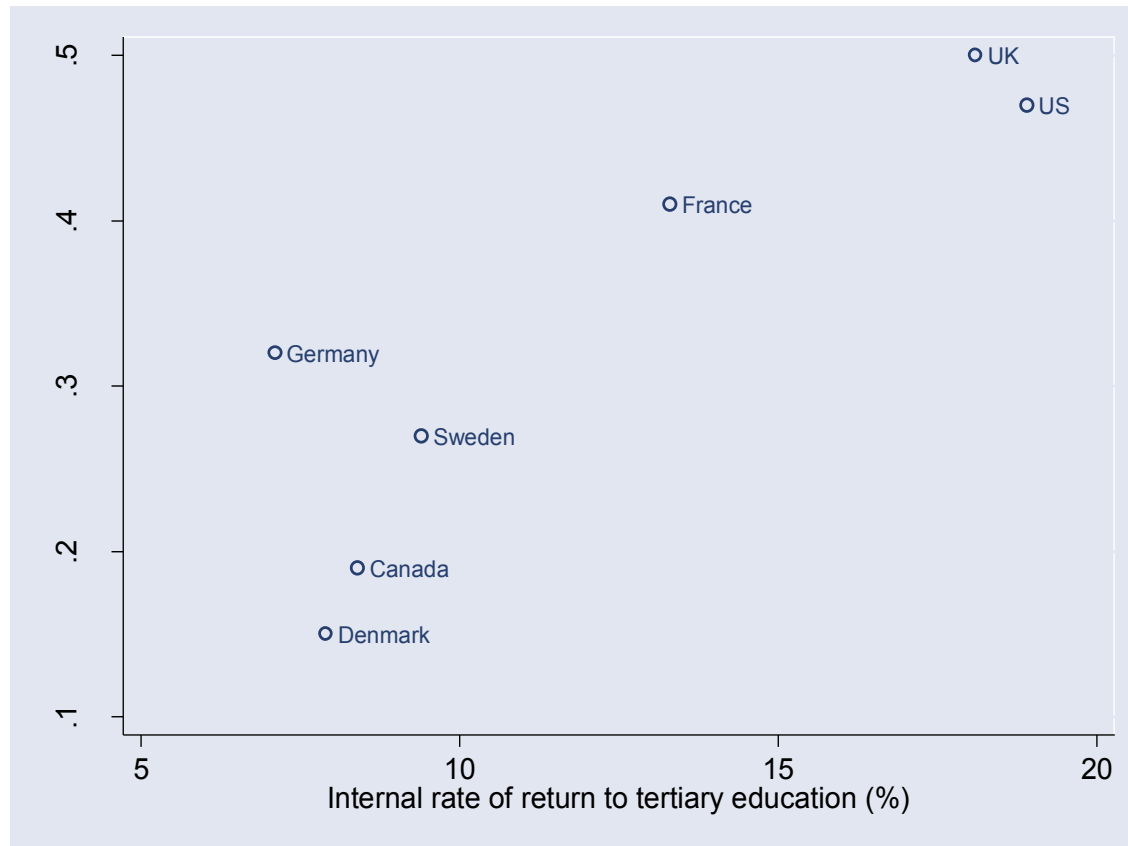
- Markets determine the structure of rewards
- Families invest in children and create opportunities
- Public policy can exacerbate or attenuate the differences in opportunities between families





Rewards ...

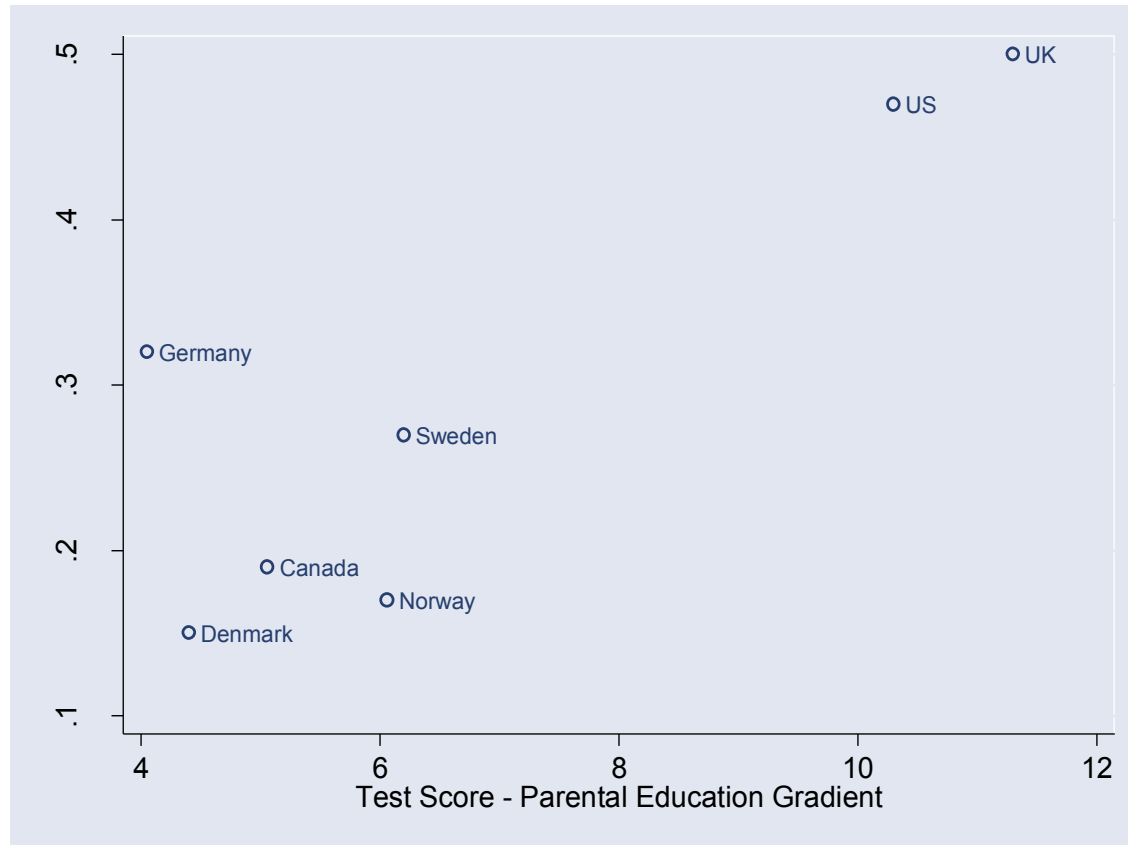
generational earnings mobility is lower the
greater returns to higher education





Opportunities ...

generational earnings mobility is lower the greater the influence of family background on cognitive skills of children





Two conceptions of public policy directed to equality of opportunity

1. ***The Welfare State as a scheme for redistribution or insurance***

- Income transfers to reduce inequalities in the present

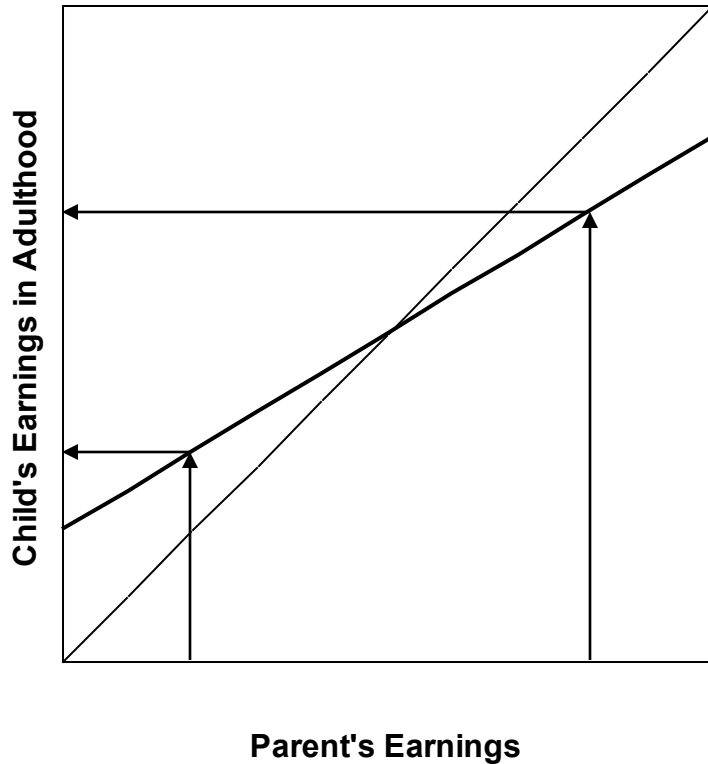
2. ***The Welfare State as 'enabling' or 'investing' in children***

- Increased access to higher and higher levels of education
- Early childhood education



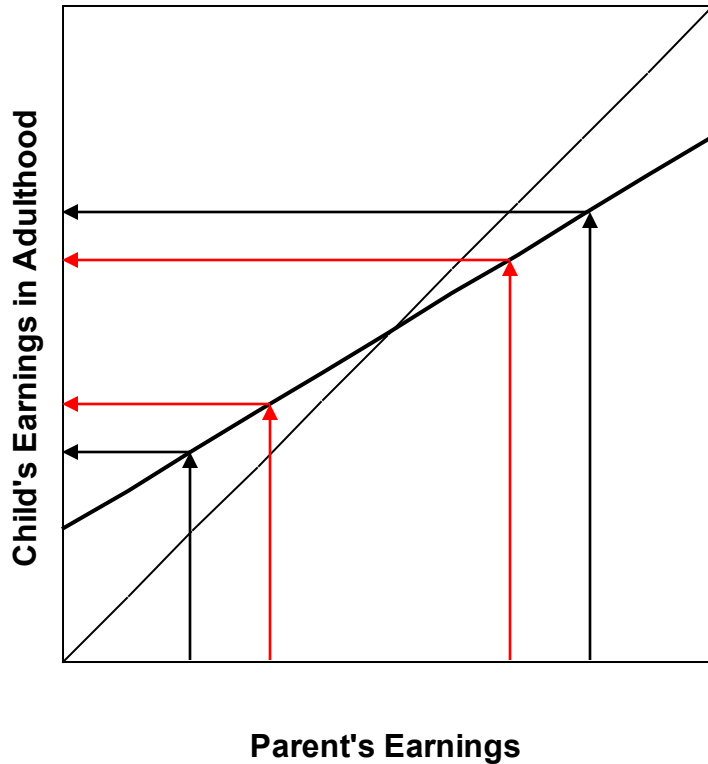


Consequences of income transfers from a generational perspective



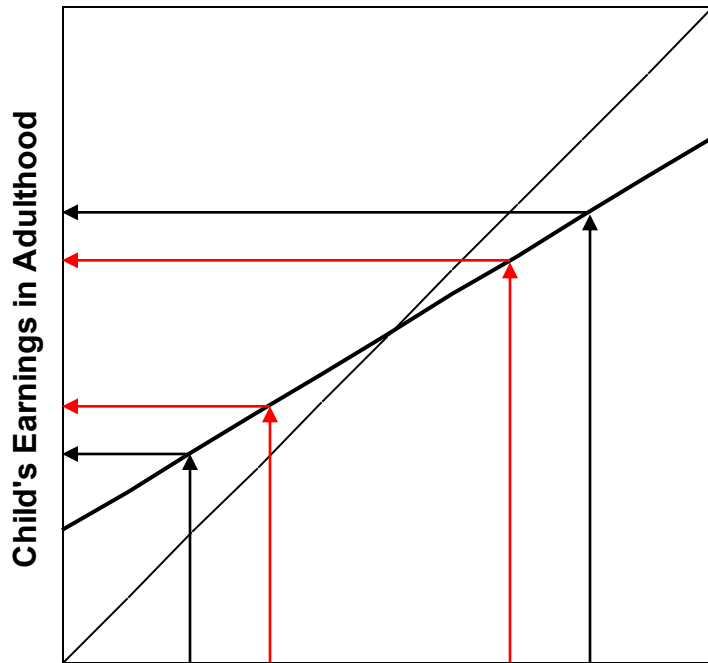


Consequences of income transfers from a generational perspective

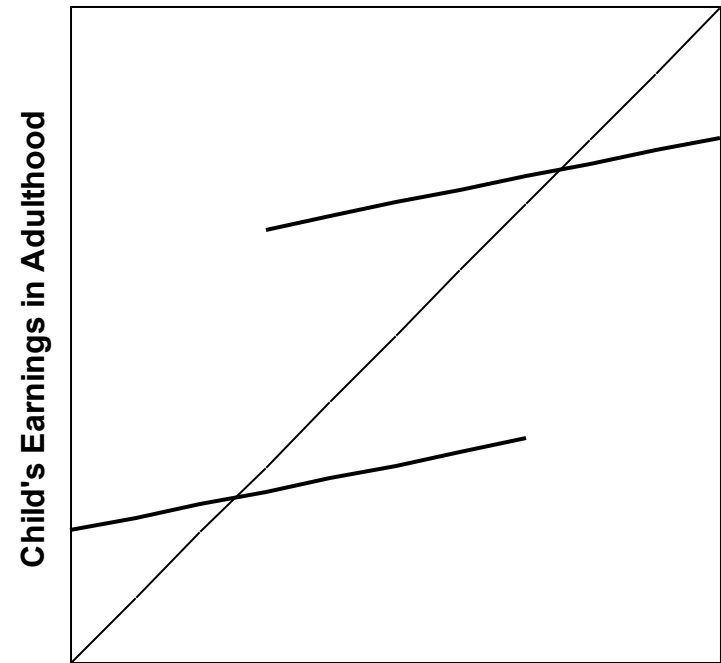




Alternative consequences of income transfers from a generational perspective



Parent's Earnings

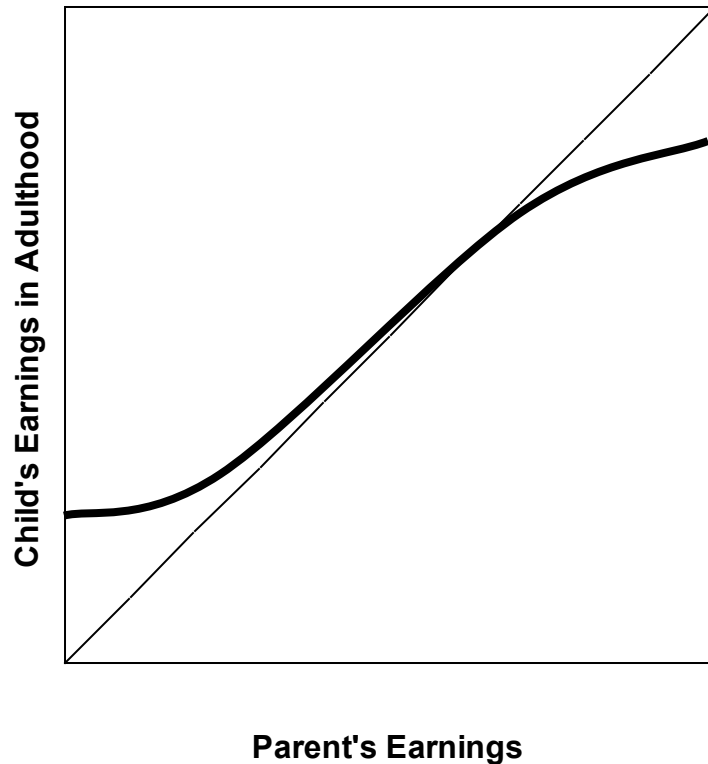


Parent's Earnings



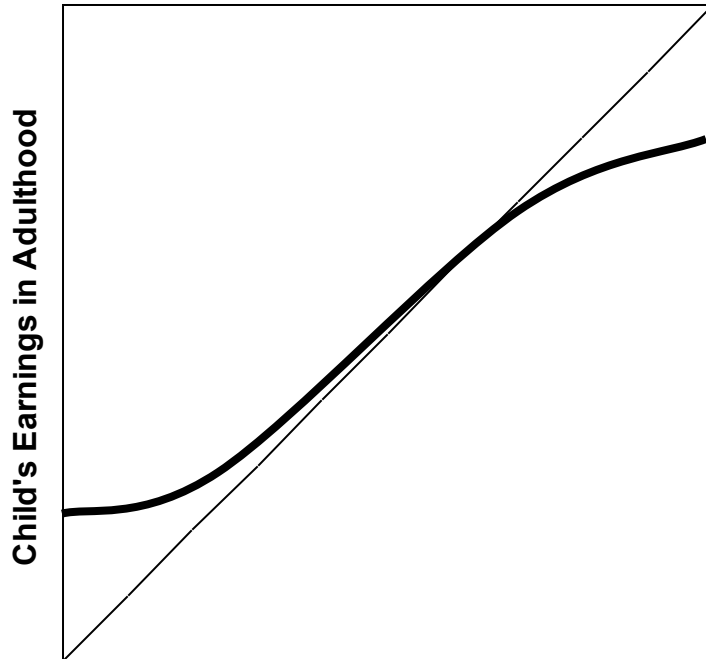


An interpretation of non linear patterns in β

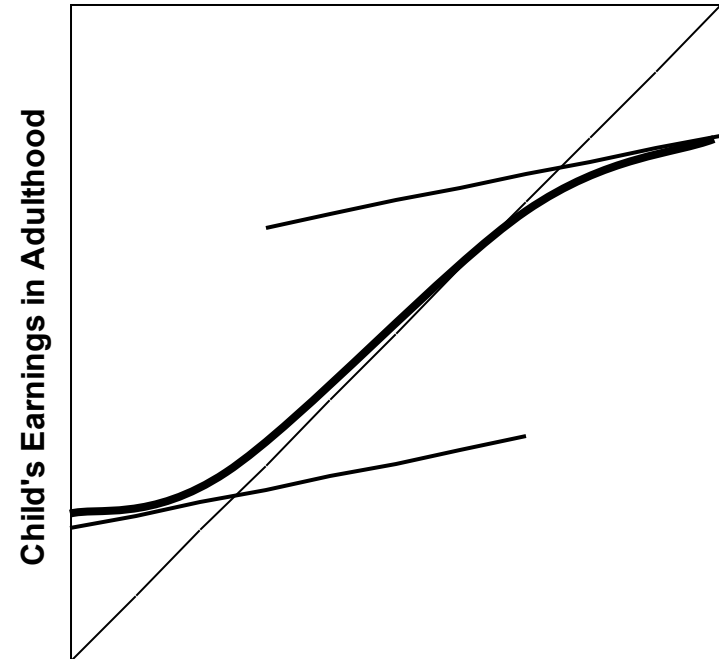




An interpretation of non linear patterns in β



Parent's Earnings

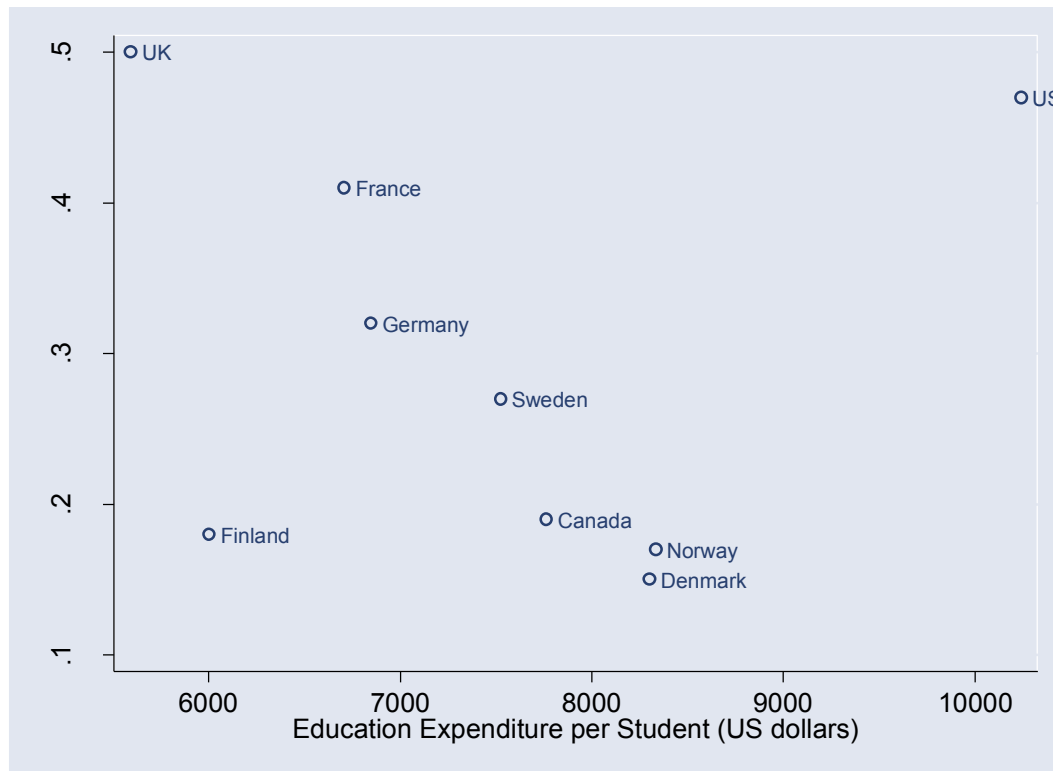


Parent's Earnings





Not just the level of education spending matters for the degree of generational mobility



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Generational influences have their basis in early childhood education

socio-economic circumstances early in life →
birth weight and cognitive/social/emotional development →
readiness to learn →
language development →
behavioral problems in school and educational achievement →
skills and mental well-being in adulthood →
labour market success and job characteristics →
stress, disability, absenteeism →





Three major findings/implications

1. Countries differ significantly in the extent to which parental economic status is related to the labour market success of children in adulthood.
2. Public policy can exacerbate or attenuate the influences of markets and families
 - Countries with the highest degree of generational mobility are those reducing the influence of family background not only on access to education and jobs, but also early childhood skills and motivation
3. To promote generational mobility there is a need to re-configure the welfare state to invest in children, not simply to provide insurance and income support





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