Social Mobility
On intergenerational income mobility, income inequality, and inequality of opportunity

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Outline

Why do we care about social and economic mobility?

Should we prioritize promoting mobility over reducing inequality?

Speculation on future mobility

Concluding remarks

Why be concerned with social and economic mobility?

- ▶ relation to *equality of opportunity*
  Family background is not chosen, so great importance of it may violate equality of opportunity norms.

- ▶ other social *effects*
  E.g. strong intergenerational class persistence → strong political left (Erikson and Goldthorpe, 1992).

- ▶ *causal effects* of parental income or other parental factors on socio-economic position of offspring
  Can point to desirable policy interventions.

Social and economic mobility

- ► social mobility (*social*)
  based on social class or social prestige, in turn primarily
  based on occupation
- ► educational mobility (*social*/*economic*)
  based on educational achievement (level of qualifications,
  years of education)
- ► income mobility (*economic*)
  based on economic standard of living (individual earnings;
  household disposable income)

Why does intergenerational income mobility matter?

- ▶ interesting in its own right (a social statistic)
- ▶ tells us about social dynamics and the formation of economic status
- ▶ informs judgments on social justice
- ▶ if persistence is big issue, poverty alleviation may be needed to improve life chances of poor children, *given* consensus as to what alleviates persistence (not yet there...)
- ▶ concerns with social and economic mobility/equality of opportunity widely shared, but hard trade-offs need at times to be faced (and rarely are)

Does perfect social mobility mean we have equality of opportunity?

- ▶ *perfect mobility* is generally understood to mean the *independence* of offspring status from the status of the parent
- ▶ *equality of opportunity*, as operationalized in modern social science, does not necessarily imply independence . . .
- ▶ . . . but rather asks that we distinguish between inequality driven by variations in *circumstances* over which individuals can not be held responsible and inequality driven by variations in *effort* (Arneson, 1989; Roemer, 1998)
- ▶ in practice, no society for which we have evidence exhibits independence of offspring from parents and the distinction may matter more in principle than in practice
- ▶ so, for now, let's accept that more mobility (likely) means greater equality of opportunity

Should we prioritize promoting mobility over reducing inequality?

- ▶ people tend in general (but not universally) to be in favour of equalizing opportunity, even if they are unenthusiastic about reducing inequality
- ▶ it was long believed that the two are substitutes, but there is reason to believe they may, in fact be complements

Milton Friedman in *Capitalism and Freedom* (1962):

A major problem in interpreting evidence on the distribution of income is the need to distinguish two basically different kinds of inequality; temporary, short-run differences in income, and differences in long-run income status. Consider two societies that have the same distribution of annual income. In one there is great mobility and change so that the position of particular families in the income hierarchy varies widely from year to year. In the other, there is great rigidity so that each family stays in the same position year after year. Clearly, in any meaningful sense, the second would be the more unequal society. The one kind of inequality is a sign of dynamic change, social mobility, equality of opportunity; the other of a status society. The confusion behind these two kinds of inequality is particularly important, precisely because competitive free-enterprise capitalism tends to substitute the one for the other.

Intergenerational persistence

- the most common measure of intergeneratiional persistence, β, the Galtonian intergenerational income elasticity is an empirical quantity of enduring interest:

$$y_O = \alpha + \beta y_P + \epsilon \tag{1}$$

- two interpretations of Galtonian β:
 - *descriptive*: the slope of the conditional expectation of offspring income, given parental income ("mechanical"):

$$\beta := \frac{\partial \mathsf{E}[y_O|y_P]}{\partial y_P} \tag{2}$$

  - *causal*; the causal effect of a change in parental income on child income ("economic"):

$$\beta := \frac{\partial y_O^*}{\partial y_P} \tag{3}$$

  Note the y_O^*, intended to convey the sense in the second equation/interpretation that offspring income is at least in part the results of optimizing behavior on the part of parents.

The duration of advantage or disadvantage across generations: different persistence values
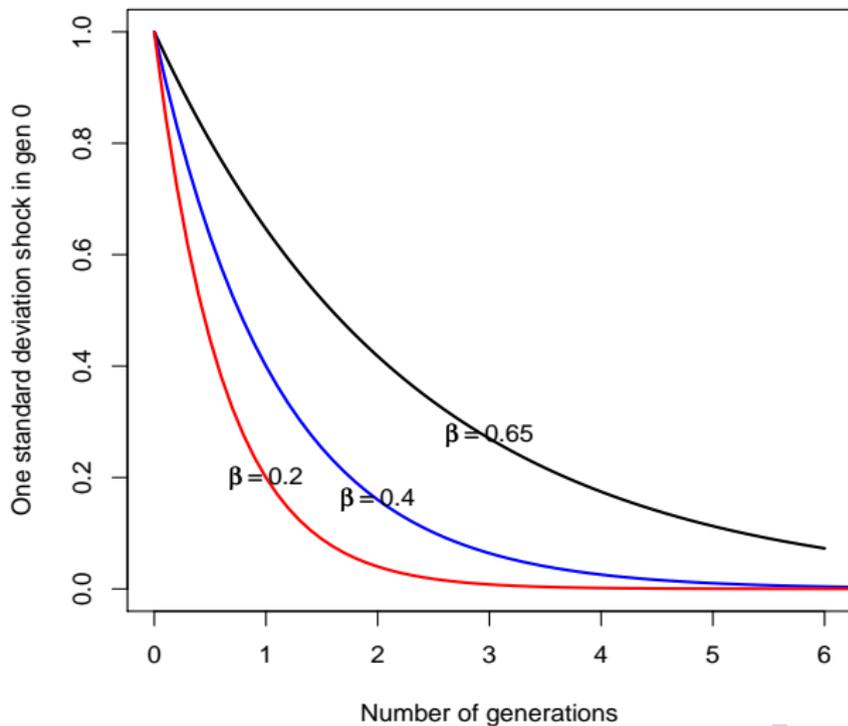
Income mobility accross generations

Number of generations it would take for those born in low income families to approach the mean income in their society
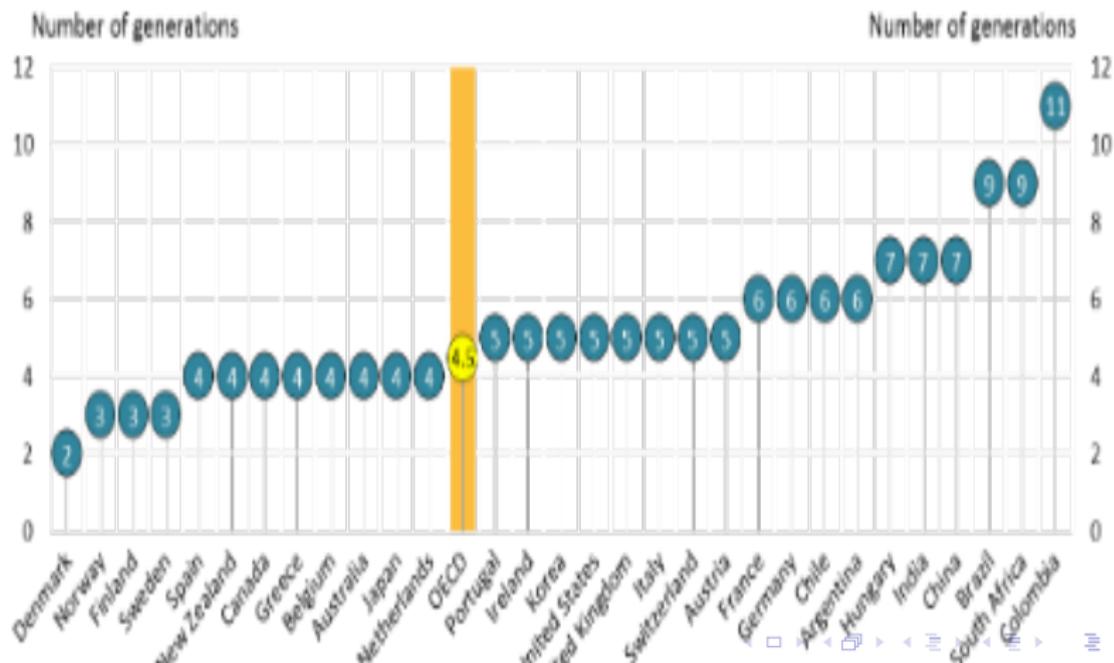
The causal interpretation

- ▶ there are many, many theoretical models of intergenerational transmission of economic status...
- ▶ ...but most empiricists get their inspiration from the Becker and Tomes (1979, 1986) model
- ▶ the simple version of it, due to Solon (2004), tells us offspring income depend on parental income and offspring human capital "endowment"

$$y_{i,O} = \mu^* + [(1 - \gamma)\theta p]y_{i,P} + pe_{i,o}. \tag{4}$$

- ▶ p is the return on human capital
- ▶ e is offspring human capital endowment
- ▶ γ measures the progressivity in human capital
- ▶ θ measures how effectively human capital investments turn into capital
- ▶ λ captures the IG transmission of the endowment

The causal interpretation

- in "steady state", intergenerational persistence depend on the parameters:

$$\beta = \frac{(1 - \gamma)\theta p + \lambda}{1 + (1 - \gamma)\theta p \lambda} \tag{5}$$

- intergenerational persistence *increases* in
    - the heritability of human capital endowments λ
    - the productivity of human capital investments θ
    - the income or earnings return to human capital p
  and *decreases* with
    - progressivity of public education spending γ
- in this simple model, these parameters also drive cross-sectional inequality, so the *intergenerational persistence* is positively *correlated* with cross-sectional *inequality* [the "Great Gatsby curve" (Corak, 2013; Krueger, 2012)]

The Great Gatsby curve

the relationship between intergenerational earnings persistence and cross-sectional income inequality; Source: Corak (2013, Figure 1).
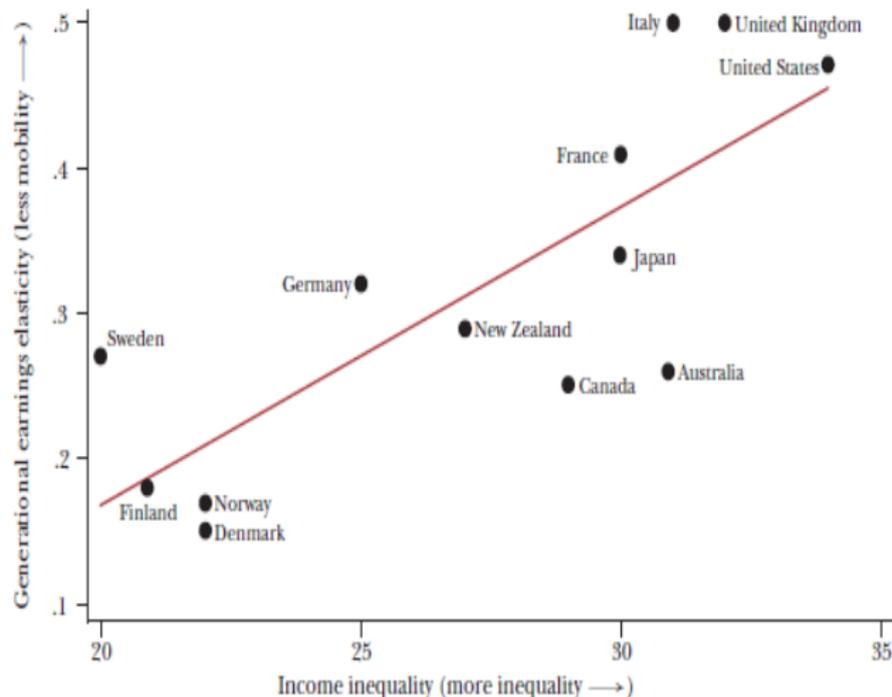
Father-son mobility table: USA

USNLSY (n = 1798)					
	Son				
Father	oq1	oq2	oq3	oq4	oq5
fq1	0.422 [0.363,0.482]	0.245 [0.189,0.302]	0.153 [0.107,0.202]	0.102 [0.065,0.142]	0.079 [0.047,0.116]
fq2	0.194 [0.142,0.250]	0.283 [0.230,0.341]	0.208 [0.159,0.260]	0.174 [0.128,0.221]	0.140 [0.097,0.185]
fq3	0.194 [0.145,0.247]	0.186 [0.131,0.241]	0.256 [0.198,0.318]	0.202 [0.148,0.259]	0.162 [0.111,0.216]
fq4	0.125 [0.082,0.176]	0.182 [0.129,0.247]	0.198 [0.133,0.263]	0.252 [0.198,0.311]	0.243 [0.187,0.300]
fq5	0.095 [0.057,0.137]	0.122 [0.076,0.170]	0.189 [0.135,0.243]	0.234 [0.176,0.294]	0.360 [0.296,0.421]

Source: Jäntti et al. (2006)

Corner probabilities – rags to riches vs riches to rags
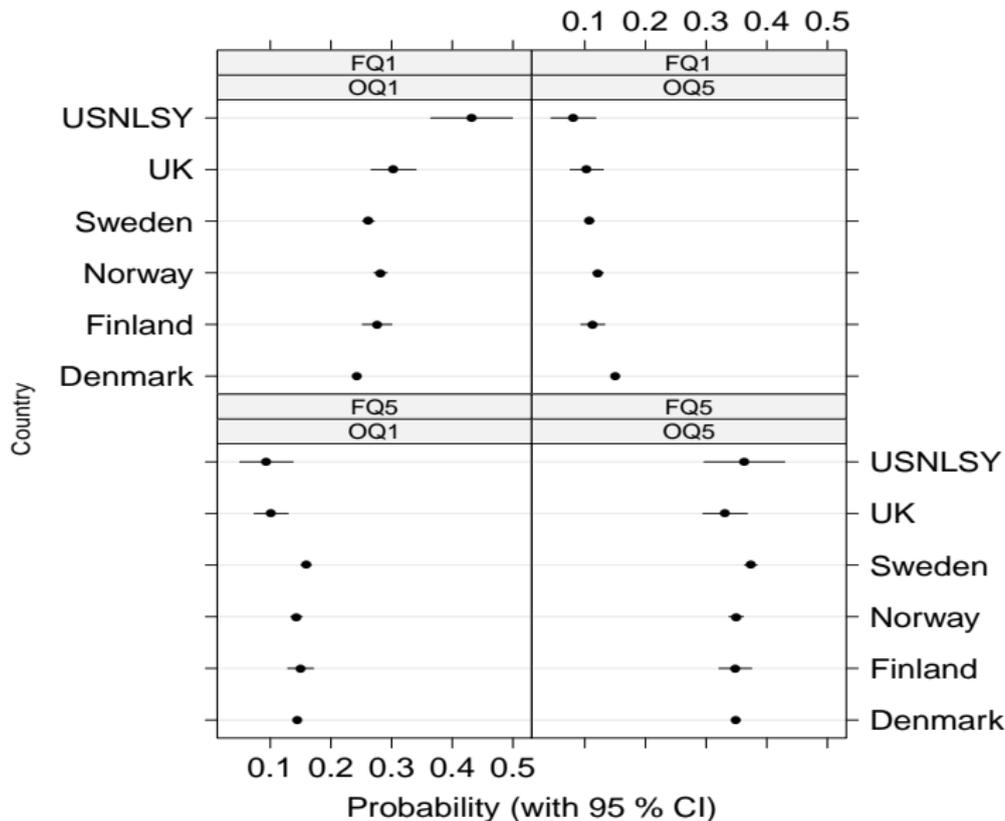
We may need to look at further evidence

- the vast majority of studies of income mobility look at
    - father-son pairs
    - individual labour income, rather than household disposable income
    - focus on income-accounting periods that are substantially shorter than ideal
- from a comparison of quasi-experimental and association studies, we know most of the persistence is not *causal*
- further, by comparing correlations of siblings' incomes with the intergenerational correlations, we know that
    - family background is *much* more important (by a factor of 2-4) than intergenerational links suggest
    - much of that family association is due to shared family and community factors that are uncorrelated with parental income
    - family background matters a lot for socio-economic traits, even when compared to physical ones

What if the Great Gatsby curve persists while inequality increases?

- ▶ the "Great Gatsby" curve plots the intergenerational persistence of income against income inequality in (roughly) the parental generation
- ▶ income inequality has increased in many or most rich countries
- ▶ what can be expected of persistence/mobility of the currently young?
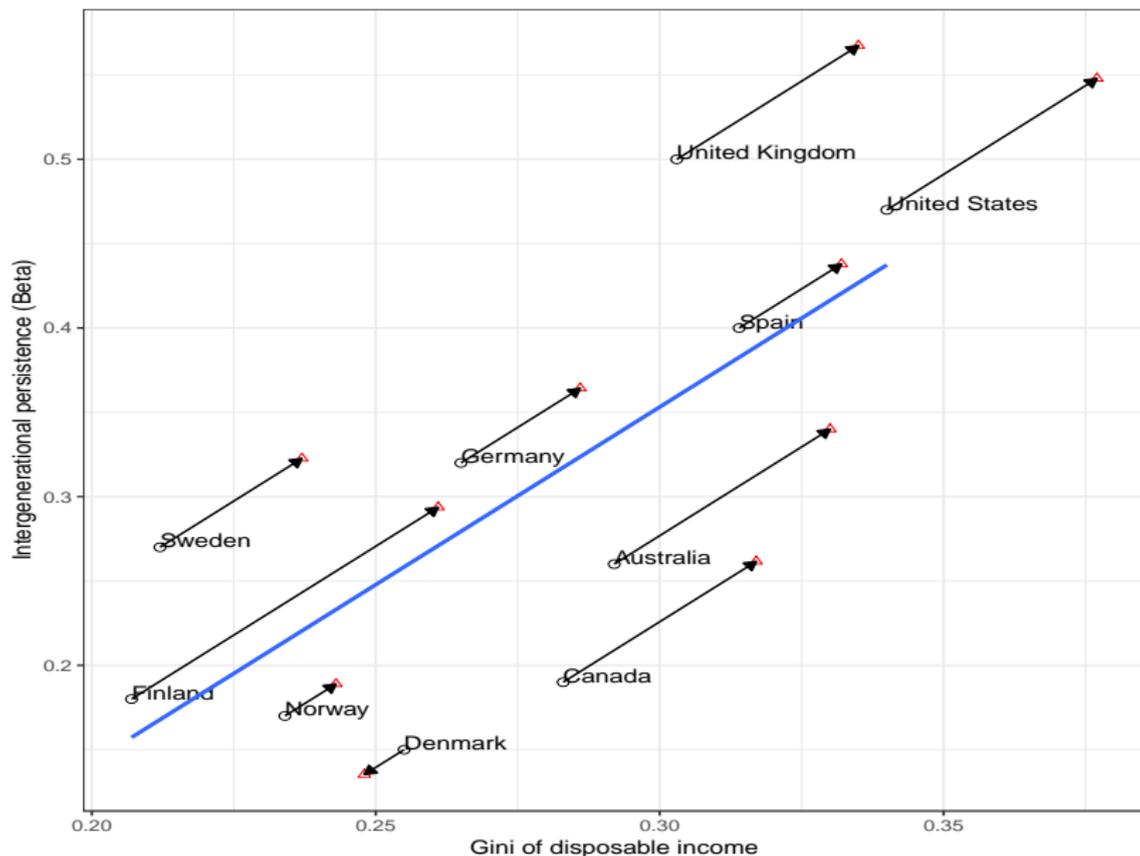- ▶ **caveat:** this is highly speculative and is intended as food for thought

The expected evolution of income persistence

GG curve for subset of countries in Corak (2013) also in Luxembourg Income Study
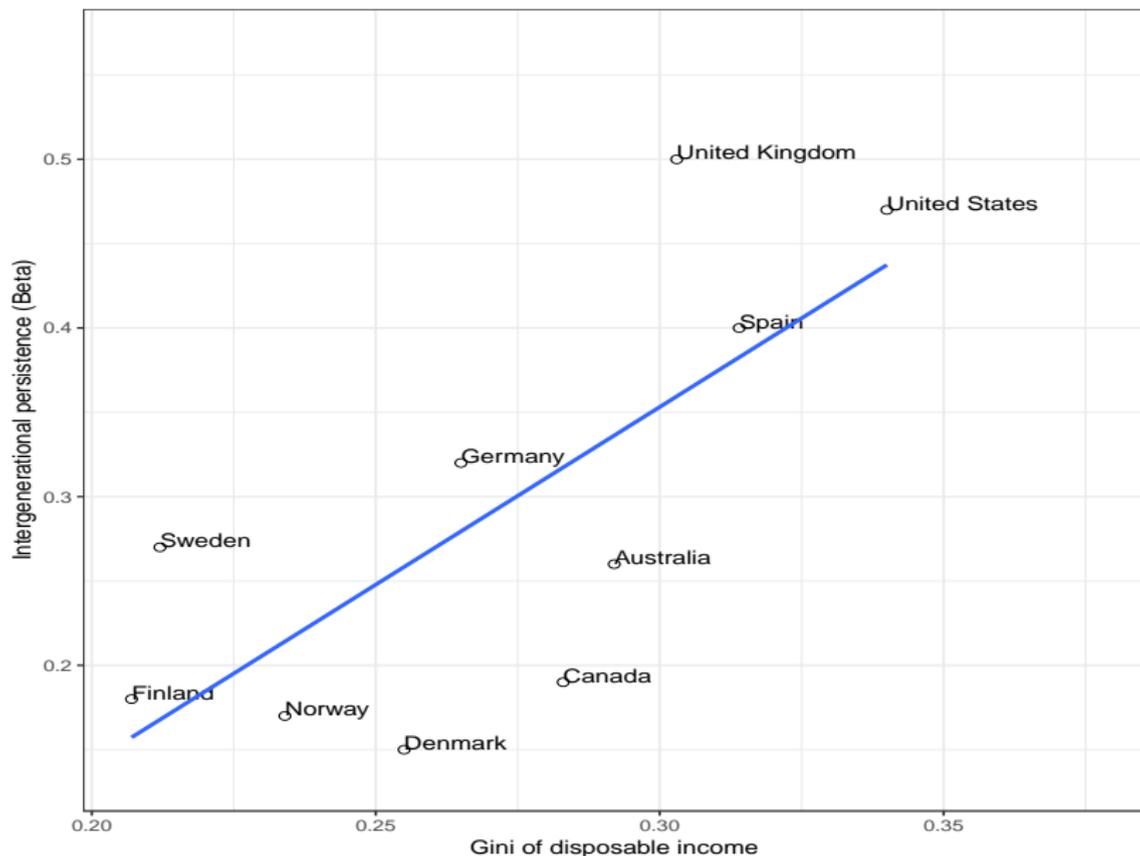
The expected evolution of income persistence

GG curve for subset of countries in Corak (2013) also in Luxembourg Income Study

Concluding comments

- ▶ intergenerational income mobility is of social and social-scientific interest
- ▶ income mobility is related to equality of opportunity (in income)
- ▶ evidence on its extent across countries and changes within countries limited (data limitations are one reason for this scarcity; however, see https://equalchances.org)
- ▶ mobility and inequality may be inversely linked – an additional reasons to worry about increasing inequality [more elaborate models complicate this, see e.g. Hassler, Rodrigues, and Zeira (2007)]
- ▶ time lags involved are considerable, so short- to medium-term concerns may crowd out concern for mobility
- ▶ but the great interest in income inequality of the past decade or so is encouraging