



Intergenerational Transmission of Disadvantage: Policy Implications

Anna Cristina D'Addio and Peter Whiteford

Social Policy Division
Directorate for Employment, Labour and Social Affairs, OECD

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Outline

- Interested in the degree to which socio-economic conditions are transferred from parents to offspring.
- Intergenerational transmission of income
- What explains the transmission?
- The contribution of education
- Policy implications

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Intergenerational transmission of income

- Intergenerational transmission of welfare-based income: strong in many OECD countries;
- Intergenerational transmission of asset-based income: very strong
- Intergenerational transmission of work-based (earnings) incomes: cross-country variations

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Estimates of IE

Box 1. Intergenerational income mobility: an empirical model

The theoretical model of Becker and Tomes (1979; 1986) allows to estimate intergenerational income mobility through the following equation:

$$\ln Y_{i,t} = \alpha + \beta \ln Y_{i,t-1} + \varepsilon_{i,t} \quad (1)$$

where $Y_{i,t}$ is the children's permanent income when they are adults (t indexing the generation and i the family) and $Y_{i,t-1}$ is the permanent income of parents (generation $t-1$), α is the average income of the children (generation t) when adults, $\varepsilon_{i,t}$ captures unobserved components and β reflects the relation between the income of individuals and that of their parents. This "intergenerational elasticity" expresses the fraction of relative income differences that is transmitted, on average, across generations; positive values imply generational persistence (i.e. higher incomes of the parents lead to higher child's incomes) while negative values imply generational reversion of income (i.e. higher parental income leads to lower child outcomes). In general, the empirical evidence suggests a parameter $0 \leq \beta \leq 1$. The two extreme situations are: (i) $\beta=1$: complete generational immobility; and (ii) $\beta=0$: complete generational mobility.

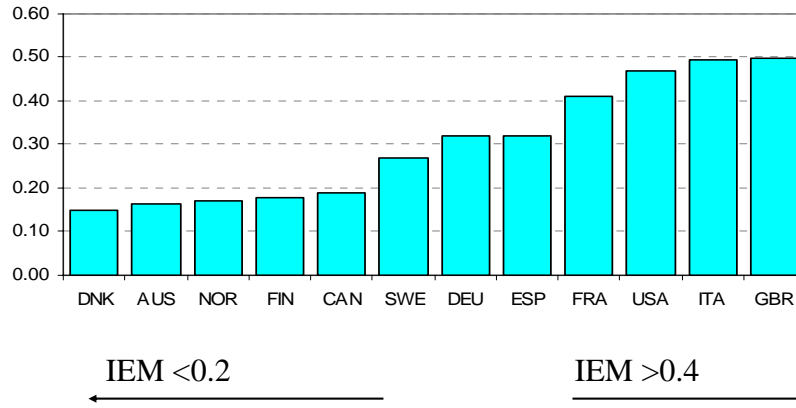
Equation (1) can be extended by adding a quadratic term of parental income, or by specifying the functional form in a more general way. Some additional right-hand side variables – such as age and age squared in order to account for the lifetime profile of income for both the father and son – are generally included

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Intergenerational earnings mobility

0 = complete mobility (independence of origins and destinations)
 1 = complete immobility

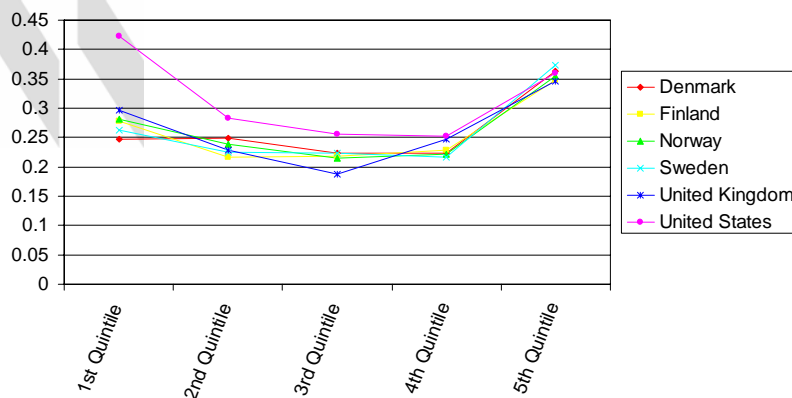


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Mobility is lower at the bottom and top of the earnings distribution...

Probability of a son being in the same quintile as his father



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What explains the transmission?

Variable	Effect	Examples
<u>Education:</u> Own schooling or Parental Education	Large and significant	+(*) Differential levels of education – measured by years of schooling – explain between 35 and 50 % of intergenerational income correlation across countries
<u>Wealth</u>	Large and significant	- Wealth accounts for more than 30% of the intergenerational income correlation in the United States
<u>Social conditions</u> Male unemployment rate measured at childbirth, Economic activity rate measured at childbirth	Significant and large	-(*) Unemployment rates in the local environment at son's childbirth, decrease his permanent wages; a 1% increase in the proportion of unemployed men at the local authority level in 1974 leads to a 1.7% decrease in son's 1991 wages.
	Significant and large	+(*)

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What explains the transmission? (cont'd)

Variable	Effect	Examples
<u>Cognitive abilities</u> IQ	Small and significant	- IQ inheritance contributes very little (1-2%) to intergenerational income transmission
Other than IQ: Test scores in mathematics and science; Writing at age 5; Mathematics at age 10;	Significant and large	- Writing at age 5 and mathematics at age 10 concur to explain around 14% of the intergenerational earnings mobility
<u>Other inherited traits</u> Similarities measured among identical twins and fraternal twins	Significant and large	- Though the contribution of IQ is small, genetic factors contribute to around 22% of the intergenerational correlation of income.
Genetically inherited traits other than cognitive skills, (e.g. race)	Large and significant	- These traits are found to matter. Mobility is lower for Blacks than for Whites (the elasticity shifts from .27 to .49).
<u>Non-cognitive abilities (and personality traits)</u> Locus of control and self-esteem;	Significant and large	+(*) Non-cognitive abilities explain around 18% of the income transmission across generations.
Aggressive behaviours, anxiety at age 10;		-(*)

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What explains the transmission (cont'd)

Variable	Effect	Examples
<u>Health status</u>		
Child birth-weight and height;	Significant +(*)	Conditioning on parental health status increase earnings mobility by 27% for sons.
Child's Mental illness; Parental health problems such as cancer, chronic bronchitis, asthma, allergy	Significant and large -(*)	

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What explains the transmission? (cont'd)

Variable	Size	+/-	Effect
<u>Family size and structure:</u>			
Unique children	(few studies) Significant	-	Intergenerational elasticity is up to 14% higher than the average elasticity for first-born and up to 12% lower than the average for last-born children. Also, sons of divorced couples are less mobile than their peers from intact families ; differences in educational attainment play an important role in explaining the variations in earnings correlations conditional on divorce.
Later born siblings	Significant	+	
Single parent	Significant	+	
Divorced parents	Significant	-	

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What explains the transmission? (cont'd)

Variable	Size	+/-	Effect
<u>Assortative mating</u>	Large and significant	-	The higher the degree of assortative mating, the lower is mobility. In the United Kingdom, on average, about 40–50% of the covariance between parents' and own permanent family income can be attributed to the person to whom one is married.
<u>Labour market attachment</u> such as time spent not in education or in unemployment	Large and significant	- (*)	Explains a significant part of income and earnings mobility and significantly decreases sons' earnings.
<u>Migrant status</u>	Significant	--	In Canada, differences in the extent of intergenerational income mobility of natives and immigrants are very small; in the United States, Sweden, Switzerland, mobility is higher among natives

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What explains the transmission? (cont'd)

Variable	Size	+/-	Effect
<u>Policies</u> Educational (such as shifting the age at which the ability of students are streamed, or subsidizing education)	Large and significant	+	The Finnish reform of education of 1972-1977, which shifted the age at which ability were streamed (from 10 to 16) and imposed a uniform academic curriculum, has implied, approximately, a 20% decrease in the intergenerational elasticity from the pre-reform average of 0.30.
Reducing income labour taxes on the poor	Unclear		

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The contribution of education is by far the most important

- Educational qualifications are still strongly transmitted in many OECD countries;
- But the important issue is the causality of the transmission; i.e. education is transmitted by genetic inheritance or because educated parents are better parents?
- Difficult question to answer...but most studies argue that both matter although family background is by far most important

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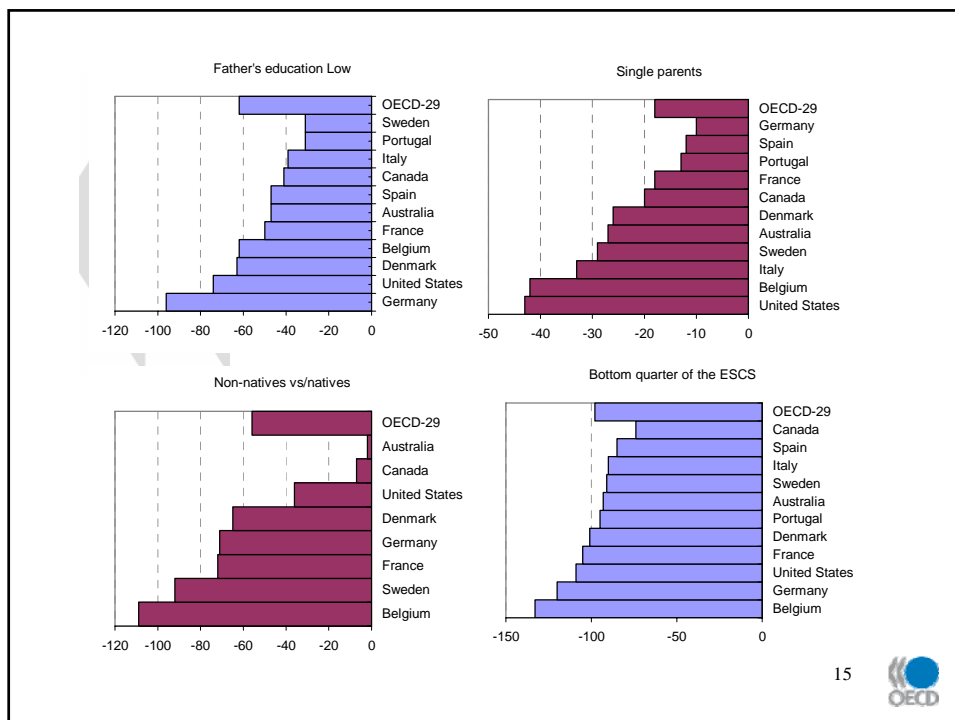


Performance scores of students and family background (PISA, 2003)

	Father's education: High versus...		Mother's education: High versus...		Household structure: couples versus...	Country origin: Natives versus...		Language spoken at home: the same versus...	Economic social and cultural index: Top quarter versus...
	Low	Medium	Low	Medium	Single parents	First generation	Non- natives	Different	Bottom quarter
Australia	-47	-35	-39	-29	-27	-5	-2	-12	-93
Austria	-46	-7	-53	-12	-3	-56	-63	-57	-94
Belgium	-62	-28	-67	-32	-42	-92	-109	-95	-133
Canada	-41	-23	-45	-21	-20	6	-7	-13	-74
Czech Republic	-111	-62	-103	-54	-5	..	..	..	-107
Denmark	-63	-41	-61	-25	-26	-70	-65	-43	-101
Finland	-34	-21	-36	-17	..	..	..	..	-71
France	-50	-19	-55	-17	-18	-48	-72	-66	-105
Germany	-96	-30	-88	-21	-10	-93	-71	-90	-120
Greece	-48	-16	-58	-21	-19	..	-47	-48	-96
Hungary	-120	-64	-115	-58	-16	..	..	..	-127
Iceland	-38	-20	-38	-22	-8	..	..	..	-61
Ireland	-49	-24	-49	-19	-33	..	..	..	-86
Italy	-39	3	-44	-1	-15	..	..	..	-90
Japan	-66	-34	-57	-28	..	..	..	..	-88
Korea	-66	-31	-60	-20	-9	..	..	..	-90
Luxembourg	-61	-24	-53	-25	-19	-31	-45	-42	-102
Mexico	-48	11	-40	20	-10	..	..	..	-91
Netherlands	-46	-29	-40	-33	-31	-59	-79	-81	-99
New Zealand	-67	-32	-61	-13	-22	-32	-5	-16	-105
Norway	-40	-23	-53	-27	-22	..	-61	-45	-89
Poland	-86	-55	-95	-54	-13	..	..	..	-95
Portugal	-31	11	-41	-2	-10	-30	..	..	-95
Slovak Republic	-127	-62	-125	-49	-4	..	..	..	-116
Spain	-47	-27	-43	-25	-12	..	..	..	-85
Sweden	-31	-2	-48	-3	-29	-34	-92	-65	-91
Switzerland	-60	-9	-56	2	-16	-59	-89	-79	-103
Turkey	-98	-50	-108	-35	-5	..	..	..	-116
United States	-74	-35	-76	-29	-43	-22	-36	-46	-109
<i>OECD-29, unweighted avg.</i>	-62	-27	-62	-23	-18	-45	-56	-53	-98

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Thus,

- Returns to human capital (e.g. Solon, 2004)
- Expenditures on education (e.g. Solon, 2004)
- matter for intergenerational transmission
- These together with income inequality and the extent to which income traits are heritable (e.g. more assortative mating) may deepen the (dis)advantage passed across generations
- But how do these reasons apply in explaining international differences?



Chart 1:
 Intra-generational vs. inter-generational perspective:
 Relationship between cross-section income inequality
 and intergenerational earnings elasticity

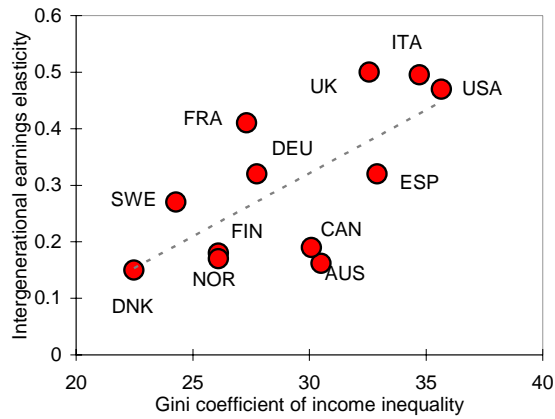
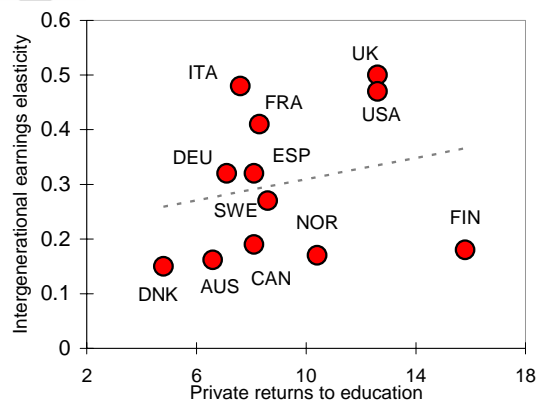


Chart 2: Intergenerational earnings elasticity and Returns to education



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- Also countries that are doing well (e.g. Canada) may see their advantage eroding

- if...

- poverty and wealth are highly inheritable
- the number of individuals from disadvantaged backgrounds (poor, welfare dependents, with low educational attainment, etc) increase, the higher the probability that the intergenerational transmission of inequalities strengthens.

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Policy implications

- Reduce other types of inequality at micro and macro-level (e.g. family background but also cross-section income inequality)
- For policymakers, the implications of the above reinforce the lessons of the child development literature.
- Childhood poverty is a route through which disadvantage is transmitted between generations, so tackling it needs to be a priority.
- Doing so by helping parents work can be more effective than by giving them cash transfers, as this may contribute to change attitudes or behaviours.

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Policy implications

- Targeting intensive health, nutrition and care supports on particularly deprived households or areas is highly desirable.
- Most important, getting good quality care in early childhood, pre-school and school is the essential tool for promoting intergenerational mobility (e.g. Heckman, 2006).