Family Background, Intergenerational Mobility, and Earnings Distribution: Evidence from the United States

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1. INTRODUCTION

Theories of intergenerational mobility have set out to explain the well documented finding that a child's income is an increasing function of that of his parents. One simple mechanism through which this pattern may occur resides in parental ability to finance their children's human capital investments (BECKER and TOMES, 1986). On its own, however, this economic mechanism cannot confirm, or rule out, the possibility that in the long run incomes of individuals may be converging.

Recent theories of distribution have highlighted some institutional mechanisms which may prevent convergence of incomes to occur in the long run. For instance, an imperfect credit market for human capital loans may reproduce inequalities in the long run (GALOR and ZEIRA, 1993). Alternatively, if education is financed through community based taxes, richer families may wish to be segregated from poor families in order to prevent the latter from paying little (if taxation is progressive) in return for enjoying high quality education for their children (DURLAUF, 1996). These are only two amongst the many possible explanations provided in this emerging literature surveyed in DURLAUF (1994), ATKINSON (1997), and PIKETTY (1998).

While at the present time we do not possess data that cover sufficiently long time horizons in order to test whether in the long run life-cycle incomes of individuals are converging[1], it is possible however to exploit limited information on the incomes of parents and children in order to test some predictions which follow from such theories. One proposition which emerges from the recent theories of distribution is that a child's expected utility is an increasing function of his/her parents' income. If this were indeed the case, then we would expect to observe that children raised in richer families are on aver-

* Université de Lausanne, Ecole des HEC, CH-1015 Lausanne. I thank TONY ATKINSON, GEORG INDERST, STEPHIN JENKINS, DANNY QUAH, DIRK VAN DE GAER, and an anonymous Journal referee for many helpful comments and suggestions. I also wish to thank JERZY SZROETER, SOBHI TAWIL, and THOMAS VON UNGERN-STERNBERG as well as seminar participants at the University of Edinburgh and Sticerd-LSE for stimulating discussions. I also thank JACQUES HUGUENIN for the German translation of the summary.

1. One could draw inferences about the steady state income distribution using incomes from two generations under the assumption that the distribution of life-cycle incomes is stationary. Whether this latter assumption holds is still an unsettled empirical issue, since life-time incomes are typically not observable.

age better off than their counterparts raised in poorer families. In a more technical jargon, this situation is referred to as one of *welfare dominance* of the distribution of children of privileged backgrounds over that of the former group.

Because such a state of affairs would tend to reinforce the view that the advantages of being raised in wealthier families are carried over to adult life, we refer to it throughout our work as the persistence scenario. Testing the persistence scenario would therefore be of interest to two related issues. On the one hand, finding evidence that children raised in wealthier families fare better as a group, would provide empirical support for the theories of persistence of inequalities (if not over the long run, than at least over two generations). Furthermore, a validation of the *persistence scenario* certainly goes against many concepts of social justice. Typically, a justice theory which emphasizes that final outcomes should not be the result of initial differences could not redeem the persistence scenario (see RYAN, 1993 for a discussion). This is true for equality of opportunity concepts, but also for entitlement theories of economic justice (SEN, 1981) which stress that society should provide individuals with a minimum set of resources which would alleviate part of their initial disadvantages.

Using incomes on a U.S. sample of 945 father and son pairs from wave XX (1967–1987) of the Panel Study of Income Dynamics [PSID], we find that the distribution of income of children raised in privileged backgrounds is ranked superior, in the sense of welfare dominance, to the distribution of children raised in disadvantaged backgrounds. We seek to explain empirically this result. We find that children of privileged origins enjoy both a higher average income and lower inequality. An examination of the probability matrix of intergenerational earnings mobility reveals that income inheritance is substantial, and is highest for children whose fathers were earning below average wages. On the whole though, the probability matrix of intergenerational earnings mobility exhibits a pattern of symmetry, with transitions from class i to class j equally likely as movements from class j to class i.

The structure of the paper is the following: section 2 discusses our data and their limitations in the context of the study of intergenerational mobility. There, we also briefly review the welfare dominance approach to ranking income distributions. Section 3 contains our results, while section 4 concludes with a summary and directions for further research.

2. DATA AND METHODS

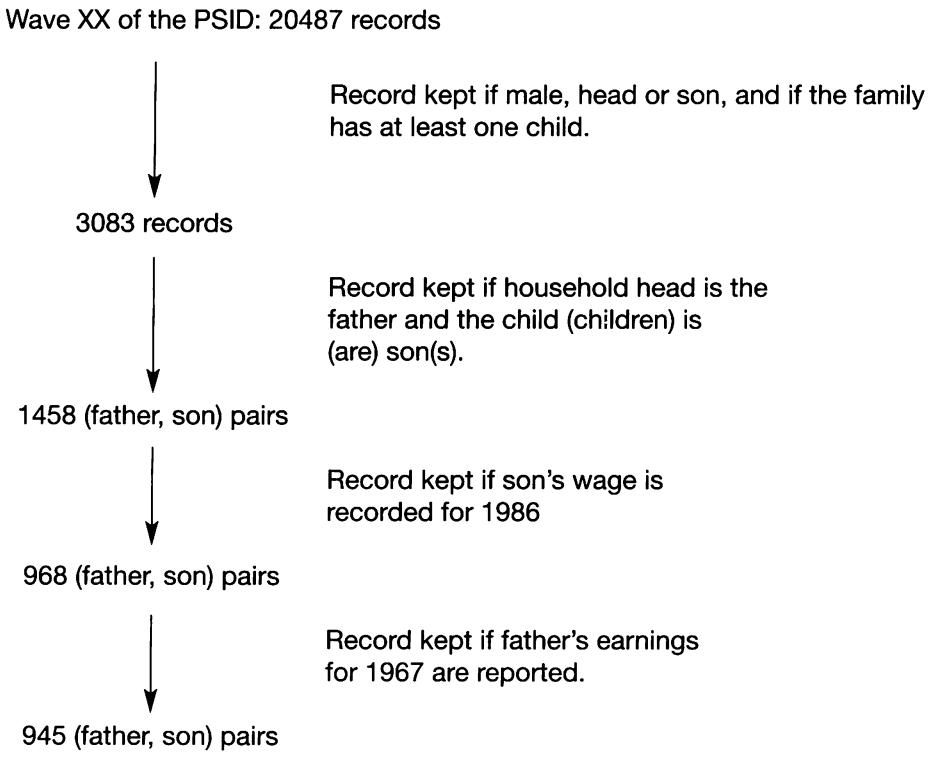
The empirical applications contained in the paper draw evidence from the Panel Study of Income Dynamics. The PSID is a U.S. nationally representative longitudinal survey of 5000 families, which has been running annually since 1968. The University of Michigan's Institute for Social Research provides annual documentation on the exact form of the questionnaire, definitions of variables, and the composition of the sample. The panel is particularly useful for the study of intergenerational mobility because the children of

the original sample families interviewed in 1968 become automatically eligible respondents when they set up, or become members of, other family units. The survey thus allows one to gather information on the earnings of parents and children at similar stages of the life cycle.

Our sample was extracted from the merged family-individual tape, of wave XX (1968–1987) of the PSID. Our first exploration of the PSID consisted in constructing a data set for individuals participating in the labour force in 1986, whose fathers were present in the initial wave of the panel, and accordingly, who reported labour income for 1967.

The initial sample comprised 20487 records and was reduced to 945 observations. Figure 1 details the steps involved with the selection procedure. Our pairs of fathers and sons were selected in two main rounds. In the first stage we retained observations where the family was male headed, and where information was recorded on at least one dependent child.

Figure 1: Selection of the fathers and sons sample



From the selected families, the individual record was retained if the person was male. We were left with 3083 individual records. In the second round, we scanned these records in order to link fathers and sons. This stage was necessary since at several occasions, the household head was an older brother or a grandfather. We then deleted pairs if either the father was not working in 1967, or the son was out of the labour force in 1986, or if for either of them, information was missing for the earnings variable. As is shown in figure 1, it is mainly missing wages for sons as opposed to fathers which caused the final sample to shrink from 1458 to 945 pairs. Earnings data in the PSID are only recorded for family heads and wives. We therefore do not possess information on the earnings of sons who are still living in their parents home, regardless of their labour force status. We were left with a total of 945 pairs of fathers and sons. We had 609 distinct fathers, so that each father was given a sample weight equal to the number of sons he had.

Table 1: Ages and hourly earnings of fathers and sons

Variable	mean	standard deviation
father's age in 1967	38.87	7.56
father's wage in 1967	3.43	2.15
Son's age in 1987	28.89	5.18
Son's wage in 1987	10.8	7.76

In table 1 we report some summary statistics for our sample. One important pattern which comes out from the table, is the seemingly higher degree of earnings inequality for the generation of children. For instance, in taking the coefficient of variation (the standard deviation divided by the mean), k = 0.718 for children, while k=0.628 for fathers. The years 1967 and 1987 pertain to two distinct periods with regards to the evolution of earnings inequality in the United States (see KAROLY,1992 for a discussion). The period 1945–1973 was one of rapid earnings growth, and saw a doubling of real wages together with a moderate rise of earnings inequality. On the other hand, the period 1979–87 saw a rapid increase in inequality around an apparently stagnant mean (especially for men)[2].

Inequality increases on the whole were ascribed to *between* and *within group* factors (cf. for instance the survey of LEVY and MURNANE,1992). Between group factors appear related to the rise in the education and experience premiums. Within group factors (i.e. increasing pay differences between observationally equivalent workers) have been partly explained by phenomena such as increasing returns to skills, increasing industry specific wage differences, and also to plant specific factors within the same industry.

2. There is some evidence that this observed trend may be partly due to measurement errors involved with earnings surveys. See HECKMAN (1993) for a discussion.

From table 1 we see that the average age of sons is about ten years younger than that of fathers. The average age of a father was 39 in 1967, while the average age of a son was 29 in 1986. One should therefore note that part of the reason why inequality is higher for sons, may be ascribed to an age effect. Particularly, since early stage of the life-cycle earnings may be noisy indicators of long-run earnings potential, the younger age of sons may over-emphasize the increase in earnings inequality experienced by this latter generation.

One should also point out that the analysis of intergenerational income data is far from being straightforward since the variables we are mainly interested in, namely life-cycle incomes, are not available to us. The emerging consensus in studies of intergenerational mobility appears to be to opt for earnings or wages (often measured in the logarithmic scale) as the outcome variable (viz. the measure of economic attainment). See for instance HAVEMAN and WOLFE (1995), table 2b. Less frequently, family income (or a transformation of this variable) is chosen, as in SOLON (1992), and COOPER et al. (1995)[3]. In sociology most research of this nature has focussed on the measurement of occupational mobility (for eg. see the cross-country study of ERIKSON and GOLDTHORPE, 1992). All these variables could then be used to measure economic status. See for instance table 4 of SOLON (1992), and ZIMMERMAN (1992).

While we chose in this study to work with hourly earnings, this by no means implies that such an indicator is ideal. Hourly earnings are limited by their low accuracy. In the PSID they are constructed as the ratio of annual earnings to work hours. They are thus likely to be subject to two sources of measurement error, annual wages in the numerator, and annual work hours in the denominator. From the PSID cross-validation study of BOUND et al. (1989), we know that both sources of measurement error are present in the construction of hourly earnings. The resulting effect is that the correlation (in logs) between reported values and company records (assumed to be free of measurement errors), is as low as 0.56 for hourly earnings, while it takes a value of 0.81 for annual earnings. In theory, nonetheless, differences in hourly wages are due to differences in productivity so that there is a clear economic meaning to be attached to this variable (discrimination on the basis of sex, race and social background are obvious departures from the «theory»). On such grounds, we follow ATKINSON et al. (1983) in selecting hourly earnings as our choice of indicator of economic status.

Let W denote the set of social welfare functions satisfying the properties of inequality aversion (s-concavity) and preference for higher incomes (monotonicity). Also, let GLC(p) denote the Generalized Lorenz curve ordinate at p. SHORROCKS (1983) proves the following theorem:

$$W(Y_1) \geq W(Y_2) \text{ for all } W \in W \text{ iff } GLC_1(p) \geq GLC_2(p) \quad p = 1,..,k$$

3. In recent work, DEARDEN et al. (1997) have proposed to predict life-cycle income using a set of time-invariant characteristics of the family unit. See ZIMMERMAN (1992) for a related methodology.

In other terms, a distribution Y_1 will be preferred to another distribution, Y_2, for all W ϵ *W*, if and only if GLC_1 – the Generalized Lorenz curve of Y_1 – lies nowhere below GLC_2, the corresponding curve for Y_2. The comparison of Generalized Lorenz curves of various socio-economic groups will thus enable us to investigate the persistence property of intergenerational mobility processes. In that specific context, define x as the income variable of the first generation. Also, let

$x \epsilon X_1$ if the parents are disadvantaged
$x \epsilon X_2$ otherwise

Given our earlier discussion we will say that an intergenerational mobility process f(x,y) exhibits persistence if for all W ϵ *W*, $W(y_1,...,y_n \mid X_2) \geq (W(y_1,...,y_n \mid X_1)$. Geometrically, this property is verified when GLC_2 – the Generalized Lorenz pertaining to the children of privileged backgrounds – lies above the curve GLC_1 associated with the disadvantaged group.

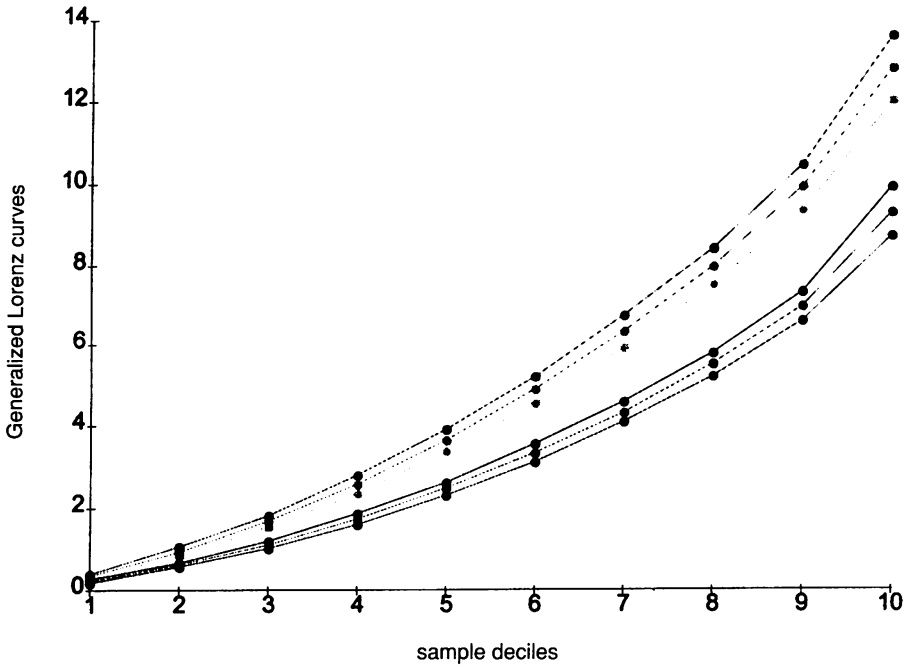
3. RESULTS

In our empirical analyses we compare the earnings distribution of those individuals whose fathers had below average (hourly) earnings, with the distribution for those who had fathers in the upper earnings group. Differences in racial composition and educational attainments of these two groups of sons deserve emphasis at the outset. The group of privileged children had an 11% share of African-American families. For those whose parents were below the average earnings level in 1967, the corresponding share of African-American families was equal to 34%. For the more privileged group, 7.8% of sons had not completed secondary education. The drop-out rate from secondary education for the latter group of sons is 24%. In the analysis below, earnings of fathers are reported for 1967, while those of sons pertain to 1986. We refer to the analysis of the two groups of children as that of «top versus bottom». Since hourly earnings are basically snap-shot observations of life-cycle incomes (cf. JENKINS, 1987), it is necessary to treat the analysis that follows as being indicative, as opposed to confirmative, regarding the pattern of intergenerational mobility in the United States.

Figure 2 depicts the Generalized Lorenz curves, [GLC], for the two groups of second generation individuals. The GLC curves are plotted at 10 different points. On the horizontal axis, the pth point pertains to the bottom p/10 fraction of the sample. In other words, it is defined as the pth decile. The GLC curve for sons from the top earnings class lies everywhere above that of sons from the bottom earnings class.

At first sight it therefore appears that the former distribution dominates the latter, so that the studied mobility process exhibits *persistence*. In order to validate the persistence hypothesis, we need to test the assumption that the GLC curve for the sons from the priv-

Figure 2: top versus bottom, Generalized Lorenz curves and 95% confidence intervals



ileged earnings background lies at every point above that of the other group. The statistic Z_p reported in the last column of table 2 tests the assumption of equality of the GLC ordinates at p. Bishop et al. (1989) show that, under the null hypothesis of equality, Z_p is asymptotically normally distributed as a N(0,1) variate. Table 2 below reports the values for the Generalized Lorenz curves ordinates and the corresponding Z_p statistics. Standard errors are reported inside brackets. GLC_2 is the Generalized Lorenz curve for the sons from the top earnings class, while GLC_1 is the corresponding curve for the sons originating from the bottom earnings group. As is seen from the last column, the differences between the GLC curve ordinates are all significant at a 99% significance level. Using the evidence from the individual Z_p statistics, we conclude that the earnings distribution for the children originating from the bottom earnings class is dominated by that of the children from the top group. We may therefore conclude that the mobility process exhibits persistence.

Table 2: top versus bottom, Generalized Lorenz curve ordinates

P	$GLC_2(p)$	$GLC_1(p)$	Z_p
1	0.35 (0.03)	0.23 (0.02)	3.74
2	0.95 (0.05)	0.62 (0.03)	5.31
3	1.69 (0.07)	1.12 (0.05)	6.61
4	2.59 (0.10)	1.74 (0.07)	6.94
5	3.64 (0.13)	2.48 (0.09)	7.30
6	4.89 (0.18)	3.34 (0.11)	7.53
7	6.33 (0.20)	4.34 (0.13)	8.32
8	7.93 (0.23)	5.51 (0.15)	8.81
9	9.88 (0.28)	6.95 (0.19)	8.80
10	12.79 (0.41)	9.29 (0.30)	6.88

Notes: Group 2 (1) pertains to children whose parents were located above (below) the mean of the earnings distribution of the first generation. Standard errors are calculated as in BISHOP et al. (1989).

Table 3: top 50% versus bottom 50%, Generalized Lorenz curve ordinates

P	$GLC_2(p)$	$GLC_1(p)$	Z_p
1	0.34 (0.03)	0.22 (0.02)	3.79
2	0.93 (0.05)	0.61 (0.03)	5.54
3	1.66 (0.07)	1.09 (0.05)	6.83
4	2.54 (0.09)	1.69 (0.07)	7.48
5	3.56 (0.12)	2.40 (0.09)	7.86
6	4.77 (0.16)	3.23 (0.11)	8.03
7	6.19 (0.18)	4.21 (0.14)	8.70
8	7.76 (0.21)	5.35 (0.16)	9.08
9	9.67 (0.25)	6.75 (0.19)	9.17
10	12.71 (0.22)	8.88 (0.29)	7.83

Notes: Group 2 (1) pertains to children whose parents were located above (below) the median of the earnings distribution of the first generation.

The same conclusion emerges if we are to split the sample of children according to the median earnings level, as opposed to the mean, of the parents' distribution. Table 3 shows that the qualitative nature of the results does not change under this latter sample split.

The fathers and sons sample therefore provides evidence in support of the persistence scenario. To a large extent, the differences mentioned above in racial composition and educational attainment of the two groups of children are at the root of this result. In seeking to further explain the finding that the distribution for children whose fathers were in the top earnings group in 1967 welfare dominates the distribution of the disadvantaged group, we address the following questions:

(i) What is the likely effect of considering alternative definitions of family background? Is the above conclusion maintained if we say compare the children originating from the top 20% income group with those whose parents were in the lower earnings quintile in 1967?

(ii) How do the distributions differ in terms of earnings inequality? Are the differences most striking at the tails or in the middle income groups?

(iii) How do the results relate to the pattern of intergenerational mobility?

We take up these points in turn.

(i) Alternative definitions of family background

What would the Generalized Lorenz curves look like if we were to compare the children originating from the bottom 20% earnings group with those from the top 20% group? Let us refer to these two groups as L20 and U20 respectively. On the one hand the heterogeneity between these two sub-samples is greater in terms of family background, so that to the extent that economic success is influenced by family background, we would expect the previously reached conclusions to be confirmed. On the other hand, since we are working with only 40% of the data, sample variances may be too high to enable us to conclude anything regarding the persistence assumption.

Table 4: top 20% versus bottom 20%, Generalized Lorenz curve ordinates

P	$GLC_{U20}(p)$	$GLC_{L20}(p)$	Z_p
1	0.428 (0.040)	0.174 (0.021)	5.558
2	1.101 (0.074)	0.491 (0.051)	6.787
3	1.962 (0.138)	0.932 (0.075)	6.552
4	3.036 (0.193)	1.474 (0.100)	7.194
5	4.373 (0.259)	2.108 (0.129)	7.828
6	5.882 (0.293)	2.848 (0.153)	9.179
7	7.503 (0.329)	3.678 (0.179)	10.203
8	9.337 (0.383)	4.708 (0.228)	10.388
9	11.490 (0.433)	6.040 (0.304)	10.303
10	14.502 (0.561)	8.462 (0.559)	7.629

As can be seen from table 4, GLC_{U20}, the Generalized Lorenz curve of the children whose parents were in the top earnings quintile, dominates the corresponding curve for the children originating from the bottom 20% earnings class. Furthermore, the differences between the Generalized Lorenz curve ordinates tend to be greater than in the former application, as a result of the wider gap between the sample averages of the hourly earnings of these two groups of children. Once again, the data allow us to confirm the persistence scenario at a 99% significance level. In an earlier draft of the work, we compared the two sub-samples used in the calculations of table 2 in terms of their family incomes adjusted by the US official equivalence scale (the so-called Orshansky needs scale). There we also found similar evidence that children of privileged origins fared better than children raised in less advantaged environments.

(ii) Testing for inequality differences

A distribution F may be less equally distributed than another one G, but provided F has a sufficiently higher mean income, the resulting pattern may be one of welfare dominance of F over G. As can be read from the last line of table 2, the mean value of hourly wages was $12.8 per hour in the privileged group and $9.3 per hour in the disadvantaged group. The Z_p statistic of 6.84 indicates that the difference in average wages is statistically significant from zero. It is therefore interesting to inquire as to which of the two earnings distributions is more equally distributed.

Abstracting for a moment from considerations of sampling variation, we may note from table 5 that the Lorenz curve for the privileged group, LC_2, is closer to the equality line than LC_1, the Lorenz curve of the latter group. The vertical distance between Lorenz

curve ordinates is lowest at p=1 (a value of 0.3%), and rises steadily up to the eighth decile. There the distance between Lorenz curve ordinates equals 3%. Though it appears that the distribution of earnings for the top group is more equally distributed ($LC_2(p) \geq LC_1(p)$ for all p), none of the differences in Lorenz curve ordinates are statistically significant. This result points to the conclusion that earnings inequality does not appear to vary a great deal across the two socio-economic groups.

Table 5: top versus bottom, Lorenz curve ordinates

P	$LC_2(p)$	$LC_1(p)$	Z_p
1	0.027 (0.002)	0.024 (0.002)	0.967
2	0.073 (0.004)	0.067 (0.003)	1.383
3	0.131 (0.005)	0.120 (0.005)	1.603
4	0.201 (0.007)	0.187 (0.006)	1.423
5	0.283 (0.008)	0.267 (0.008)	1.414
6	0.382 (0.010)	0.359 (0.010)	1.769
7	0.495 (0.011)	0.467 (0.012)	1.654
8	0.620 (0.013)	0.591 (0.013)	1.473
9	0.772 (0.014)	0.747 (0.015)	1.226
10	1	1	–

Notes: Group 2 (1) pertains to children whose parents were located above (below) the mean of the earnings distribution of the first generation. Standard errors are calculated on the basis of the analytical expressions given in BEACH and DAVIDSON (1983).

(iii) Explanations based on the pattern of intergenerational mobility

In order to relate the previously reached welfare dominance results to the pattern of intergenerational mobility, we take a close look at the square (c x c) probability matrix of intergenerational earnings mobility, that we denote below as M. The construction of a square size probability matrix is particularly useful in the context of addressing question (iii) above, since it provides a natural set-up for examining the frequency of immobility (the diagonal m_{ii} elements), as well as the nature of mobility (viz. the off-diagonal m_{ij} elements).

Our first step is to summarize the data for the top and bottom groups in terms of a 2 by 2 frequency table (table 6).

Table 6: Cross-tabulation of fathers and sons below and above the means of their respective distributions of hourly earnings

sample proportions m_{ij}	sons below average	sons above
fathers below average	40.1 %	16.8%
fathers above	20.1%	23%

By summing the elements along the rows and columns, we can extract information regarding the distribution of earnings about the mean in the two generations. Summing the first line we note that in the fathers' distribution 56.9% of individuals were positioned below the mean. In the children's distribution the corresponding figure is 60.2%. Father/son pairs which did not manage to cross the average in both generations amount to 40.1% of the sample, while fathers and sons which stayed above the mean in both distributions constitute the second largest share in the table: a figure of 23%.

Stated in terms of conditional probabilities, a child raised in a family with below average earnings has a probability of (40.1/(40.1+16.8)=70% of inheriting his father's status, while a child originating from the top group stays above the mean with a probability of 53.4%. Income inheritance above and below the mean is therefore the more likely outcome, and this is more so for the less privileged group.

In order to take a closer look at the income dynamics underlying the persistence scenario we disaggregate the data further in table 7, into four income classes. Group 1 contains individuals with less than half the average wage, group 2 contains individuals with wages between 50% and 100% of the mean, while group 3 indexes individuals between 100% and 150% of the average, and the final group contains individuals with wages in excess of 150% of the average. Our aim here is to relate our previous findings to the relative intensity of upward and downward mobility. For a given level of income inheritance (that is holding the total number of data points on the diagonal fixed), three scenarios regarding the nature of mobility can be envisaged. When upward mobility prevails (especially from the bottom), a catching up phenomenon ensures that a fraction of the children from less privileged origins are able to partly make up for their initial economic disadvantages. Conversely, when downward mobility is the more frequent phenomenon, children raised in richer families do not maintain their privileged ranks during their adult lives. Symmetry is the intermediary case between these two scenarios whereby the forces towards income equalization ensure that there are as many upward mobile sons as the number of downward mobile ones.

Looking at the cell counts m_{ij}, the data tend to reveal a pattern of symmetry. Under the symmetry assumption, the probability of observing upward moves from class i to j, m_{ij}, equals the probability m_{ji} of observing a similar downward move. The symmetry property can be stated either in terms of a matrix of counts T, where T = n M, and n is the

sample size, or in terms of the probability matrix M. A test of symmetry, based on the matrix of counts T, is described in EVERITT (1977) p.155. The statistic X^2:

$$X^2 = \sum_{i<j} \left\{(t_{ij} - t_{ji})^2/(t_{ij} + t_{ji})\right\}$$

is asymptotically distributed as a Khi-Square variable with v=c(c-1)/2 degrees of freedom, where c is the number of classes. The form of the above test follows from the fact that, under the symmetry model, the maximum likelihood estimator of m_{ij} is given by $(t_{ij} + t_{ji})/2n$, where t_{ij} is the number of counts in the ijth cell. Thus, under both symmetry and the unrestricted model the diagonal elements m_{ii} of the probability matrix M are identical.

In table 7 we construct the probability matrix of intergenerational earnings mobility for the unrestricted and symmetry models. The elements inside parentheses denote probability estimates for the symmetry model. A comparison of the estimates of M for both models shows little discrepancy under the symmetry assumption. A test of symmetry using the X^2 statistic described above gives a figure for X^2 equal to 6.80. Here c = 4, so that we have v = 6 degrees of freedom. The critical value of our test at a 5% probability of type-I error, is 12.60. The hypothesis of symmetry thus cannot be rejected.

Table 7: The unrestricted and symmetry models for the probability matrix of Intergenerational earnings mobility

M_{ij}	1	2	3	4
1	0.071	0.085 (0.086)	0.030 (0.034)	0.018 (0.015)
2	0.087 (0.086)	0.159	0.082 (0.096)	0.039 (0.040)
3	0.038 (0.034)	0.110 (0.096)	0.086	0.050 (0.047)
4	0.012 (0.015)	0.041 (0.040)	0.043 (0.047)	0.051

Notes:

1. Classes are ranked from 1 lowest, to 4, highest. For each distribution the threshold values are respectively 50%, 100% and 150% of the sample mean of hourly earnings. The subscript *i* indexes the father's class, *j* indexes the son's.
2. Figures in parentheses denote probability estimates for the symmetry model.

The symmetry model therefore provides us with an adequate parametrization of our intergenerational data. Upward mobility from class i to class j is equally likely as downward mobility from class j to class i. For instance, under the symmetry model, $m_{14} = m_{41}$, estimated at 1.5 %. Symmetry on its own however is not likely to explain away the persistence scenario: to take a limiting case, we may note that a probability matrix with zeros assigned to the off-diagonal elements is symmetric, and yet it does not exhibit any income mobility whatsoever. It is rather the combined effect of a high intensity of income inheritance – 36.7% of father and son pairs are positioned along the diagonal elements of table 7 – coupled with symmetry, which taken together account for the prevalence of the persistence scenario.

5. CONCLUSIONS

Recent theories of income distribution have emphasized the dependence of a person's success upon her parents' income. The fact that initial advantages may remain over the life cycle, a point raised by justice philosophers and policy analysts over two decades ago, has been investigated in this paper through the welfare comparison of the income distributions of children raised in disadvantaged and privileged environments. An intergenerational mobility process was said to exhibit persistence if the income distribution of the latter group was ranked superior to that of the former group, in terms of the welfare dominance criterion.

Bearing in mind that life-cycle biases, measurement errors, and lack of population representativeness, may be serious sources of data limitations, we conclude that the intergenerational data we have examined lead to the confirmation of the persistence scenario. This result is explained by noting the occurrence of an apparently symmetric pattern of movement between income classes, coupled with relatively high income inheritance probabilities. The resulting effect is such that the income distribution of children originating from privileged backgrounds dominates the distribution for children from less favourable economic backgrounds.

These conclusions were reached on the basis of the PSID. Other U.S. data sets ought to be examined before one makes strong assertions about the pattern of intergenerational mobility in the United States. Also, such findings need not be valid for other countries. The occupational mobility study of Erikson and Goldthorpe (1992) suggests that, amongst developed economies, some differences in the pattern of intergenerational mobility can be observed between on the one hand the group of European nations, and on the other hand, the U.S. Australia and Japan. [Former] Socialist economies may be expected to exhibit a different pattern from market economies. The stage of economic development may also be an important factor. The time horizon over which incomes are observed could also be an important element. Studies of occupational mobility suggest that individuals experience some downward mobility in their first years of work, but eventually converge to their parents occupational group. Finally, we note that our sam-

ple only looked at the mobility of men. Because the labour force participation of women is governed by different circumstances from that of men, there is no reason to expect the patterns of intergenerational mobility of men and women to be similar.

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SUMMARY

An emerging literature in the field of income distribution suggests that inequality may persist in the long run. U.S. father and son income data extracted from the PSID support the hypothesis that the distribution of earnings of children raised in privileged environments welfare-dominates that of children of disadvantaged backgrounds. We provide the following explanations for this finding: (i) children raised in privileged backgrounds tend to have higher average earnings and more equally distributed incomes than children originated from disadvantaged environments, (ii) class inheritance is substantial for the less privileged group. On the whole though, the probability matrix of intergenerational earnings mobility exhibits a pattern of symmetry with transitions from class i to class j equally likely as movements from class j to class i.

ZUSAMMENFASSUNG

Eine wachsende Literatur im Bereich der Einkommensverteilung weist darauf hin, dass Ungleichheit langfristig andauern könnte. Amerikanische Vater-und-Sohn-Einkommensdaten aus dem PSID bestätigen die Hypothese, nach welcher die Einkommensverteilung von Kindern, die in privilegierten Umfeldern aufgewachsen sind, diejenige von Kindern aus ungünstiger Herkunft Wohlstand-dominiert. Wir geben die folgenden Er-

klärungen für diese Funde: (i) Kinder, die in einem privilegierten Umfeld aufgewachsen sind, haben tendenziell höhere durchschnittliche Einkommen und mehr Gleichheit in der Einkommensverteilung als Kinder aus ungünstiger Herkunft, (ii) Einkommenserbschaft ist bedeutend für die weniger privilegierte Gruppe. Doch im Ganzen zeigt die intergenerationelle Einkommenswahrscheinlichkeitsmatrix ein symmetrisches Muster, mit einem Übergang von der Klasse i zur Klasse j, der gleichermassen wahrscheinlich ist wie ein Übergang von der Klasse j zur Klasse i.

RESUME

Une récente littérature dans le domaine de la distribution du revenu, suggère que les inégalités économiques puissent se maintenir sur le long terme. Des données américaines extraites du PSID, sur les revenus d'un ensemble de pères et leurs fils, confirme l'hypothèse que la distribution des salaires des enfants originaires de milieux privilégiés, domine, selon le critère du bien-être social, la distribution des enfants moins avantagés. Nous proposons les explications suivantes à ce résultat: (i) les enfants venant de milieux privilégiés ont en moyenne un salaire plus élevé, ainsi que des revenus plus également répartis, que les enfants moins avantagés, (ii) les enfants moins privilégiés héritent la classe de revenu de leurs parents plus fréquemment. Néanmoins, la matrice de probabilité de la mobilité intergénérationelle satisfait une propriété de symétrie, où les transitions de la classe i à la classe j sont aussi fréquemment observées que des mouvements allant dans l'autre sens, de la classe j à la classe i.