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# **A Comparison of Danish and International Findings on Intergenerational Earnings Mobility**

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## **Abstract**

Intergenerational earnings mobility is an important issue, because the higher the mobility, the more opportunities are available to citizens and the easier it becomes to allocate economic resources in the most efficient way. The article provides a summary of studies of earnings mobility and makes a comparison with analyses on a Danish register data set. The earnings mobility between fathers/mothers and their sons/daughters is investigated, and shows that the father-son earnings persistence effect is found to be smaller in Denmark, Finland and Sweden than in the United States, but higher than in Norway.

*Keywords:* Intergenerational earnings correlations; transition matrices

*JEL classification:* J62; C23

## **I. Introduction**

There is general agreement that it is desirable to have high intergenerational earnings mobility because it promotes the possibility for children, independent of their social origin, to achieve an income which corresponds to their abilities. If intergenerational mobility in

society is small, there will be a greater probability that it will be the same children who will have relative earning levels similar to that of their parents, either high or low. Beyond being viewed as socially unjust, there is a socioeconomic problem in that labour cannot be optimally utilised and the total welfare does not meet the greatest possible need.

The purpose of this article is to calculate the intergenerational mobility in Denmark in terms of elasticity coefficients. A high value of the coefficient is an indication of limited intergenerational earnings mobility, while a low value indicates high mobility. This article thus serves to complement the work of Solon (2002), whose cross-national comparison of elasticity coefficients did not include Denmark. We therefore investigate whether Denmark distinguishes itself from other countries in terms of earnings mobility between generations. Finally, inspired by Solon (2002), we will address possible mechanisms which operate in the intergenerational transfer of earnings.

We define earnings mobility or social inheritance<sup>1</sup> as the association between the position of one generation in a rank order in relation to the position of a second generation. Hence, if the position that a randomly selected person achieves in the earnings distribution is not dependent on the position achieved by his or her parents, it is a case of full earnings mobility, while low earnings mobility is characterized by the parents' position being sufficient to predict the position of their child in the earnings distribution. In other words, the question is whether the children's economic situation is associated with that of their parents, or whether they are, so to say, randomly distributed in the earnings of income, i.e., independent of their conditions of economic upbringing.

In the following Section II, we discuss previous studies of mobility and the different explanations for why mobility may be limited. In Section III we describe the often applied goals for mobility, while Section IV describes the data set applied in this paper. Finally, Section V presents findings for Denmark compared with other countries, and Section VI presents a conclusion.

## **II. Previous studies**

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<sup>1</sup> Both concepts are used interchangeably in this article. Besides earnings, social inheritance can refer to the fact that education, unemployment, criminality, etc. are reproduced from one generation to the next.

There is considerable economic research on intergenerational mobility, mainly in the form of various empirical analyses (Corak, 2004; Munk, 2003a; Bonke and Munk, 2003).

Søndergaard (1999) distinguishes between research which looks directly at co-variation between the parents' and children's economic situation and research that compares siblings' economic situation with that of non-siblings having the same background characteristics. A relatively small variation in the siblings' economic situation compared with the variation between siblings and non-siblings conditions is thus taken as an expression of low intergenerational earnings mobility. See Solon (1999, 2002) for an overview of the relationship between children/parents and Feinstein and Symons (1999) for an overview of sibling relations, and for comparisons see Björklund *et al.* (2002).

The child/parent relationship is usually investigated at a specific point of time due to data-limitations. Thus, most longitudinal datasets have a too short a period of time to ensure that the younger generation has achieved an age making it possible to earn an income on the labour market for which reason earnings information for only one cohort is available. Exceptions are Bratberg, Nilsen and Vaage (2005), who apply different cohorts showing increasing earnings mobility when more than one cohort is considered (for sons, not for daughters). Moreover, the earnings mobility might also vary over the income distribution, which also confirmed by Bratberg, Nilsen and Vaage (2005) is showing the greatest mobility – the least social inheritance – in the middle of the distribution and more persistence at the top and bottom.

Concerning siblings, the question is also whether there is a difference in social inheritance between girls/boys and fathers/mothers. Hence, most studies focus on the transfer of social heritage from father to son. However, an increasing number of studies also include the relationship between father and daughter and between mother and daughter/son. To the extent that daughters and sons are raised differently, by, for example, investing more effort into the sons' education, it must entail that the degree of intergenerational mobility would be lower for sons than for daughters. If, on the other hand, daughters have their mother as their example and role model, the similarities between them can show themselves to be just as salient as between father and son.<sup>2</sup> For the same reason, social mobility between father and daughter must be expected to be greater than the intergenerational mobility

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<sup>2</sup> Deding and Hussain (2005) show that the social educational inheritance is greater from mother to children – girls and boys – than from father to children.

between father and son, a finding also confirmed by Corak (2001) for Canada and by Chadwick and Solon (2002) for the United States.

According to Plug and Vijverberg (2003), there is a degree of positive correlation between parents' and children's latent abilities – genetic inheritance – which means that mobility can have a partially biological explanation. Björklund *et al.* (2005) confirm this finding by distinguishing between the effect of pre-birth factors, including genes and pre-natal environment, and post-birth factors such as childhood environment. Based on a unique Swedish Adoption dataset with information on background characteristics for the biological parents, the adoptive parents and the adoptees themselves, Björklund *et al.* demonstrate that both pre- and post-birth factors contribute to intergenerational transmissions. Moreover, pre-birth factors are found to be more important for the transmission of the mother's education and less important for the transmission of the father's income, the latter predominantly affected by post-birth environment. However, a positive correlation between pre-birth factors and post-birth environment is demonstrated. Although Plug (2002, 2004) and Behrman and Rosenzweig (2002)<sup>3</sup>, McIntosh and Munk (2005) show that the parents' (the father's) education is more significant, the analyses by Björklund *et al.* has increased our understanding of the determinants of children's educational and economic outcomes.

The question of how the resources between parents and children are transmitted, however, remains inconclusive (see Munk, 2003b). Two possible explanations are that the transmission takes place via a direct or indirect transfer of economic capital or via some sort of social and cultural capital. In both cases, transmission entails an increase in children's earnings potential and, thereby, higher future earnings.<sup>4</sup> Corak (2001) argues that the transmission of social and cultural capital can be elucidated by comparing the parents' earnings with those earnings of their children, while transmission of economic capital can be

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<sup>3</sup> Indeed, controlling for women's income and childrearing ability and the ability and schooling of their husband entails a marginally negative coefficient for mother's schooling in the determination of child schooling attainment, while the father's level of attainment remains significantly positive.

<sup>4</sup> Beyond upbringing, we can mention factors such as the child's circle of friends and acquaintances, residential area and environment, all of which are often a determinant of and are associated with the parents' educational background (Rasmussen, 1999; Graversen *et al.* 1999, McIntosh and Munk 2005; Munk 2003b).

expressed in the incomes for the two generations, in that the income includes wage as well as unearned income and private transfers. In this connection, it can be seen that the social inheritance measured by income is slightly larger than social inheritance measured by earnings only, but that the difference is small.

Several studies find that educational attainment levels are transferred from one generation to the next (see for example Deding and Hussain, 2005; McIntosh and Munk, 2005; Björklund et al. 2005). A possible explanation is that parents with higher education use more time together with their children than parents with shorter or no secondary education (Leibowitz, 1974; Hill and Stafford, 1974; Bonke, 1995). This can be explained by the fact that assisting children with homework and similar forms of socialization are given higher priority – high income effect – and that other people are not considered to do so just as well – low substitution effect. The increased time with children can also be explained by the fact that parents' education increases productivity in this activity relatively more than productivity – wages – from work on the labour market. This means that caring is preferred over paid work – at least marginally - and that the parents' caring time therefore 'measures the parents' altruistic investment in the human capital embodied in their children' (Hill and Stafford, 1974).

Finally, it should be mentioned that intergenerational mobility does not always lead to increased welfare for the individual. It might occur that achievement of a higher rank in the distribution than one's parents leads to problems of integration in the new group, and that this group will therefore have considered itself immediately better off with the same, in relative terms, social position as their parents (cf. Munk 2003a). In most cases, however, the improved economic conditions must be considered as compensating for such a loss of welfare, whereby it would be a case of a net welfare gain.

### **III. Measurement of mobility**

In empirical studies, two methods are often used to measure intergenerational mobility.

One method of calculation indicates which concrete destinations the young people reach given their family background. By dividing the parental generation – the 1<sup>st</sup> generation – according to their income rank into fractiles and the children's generation – the 2<sup>nd</sup> generation – in the same way, we arrive at a mobility matrix which precisely indicates the correlation between the two generations' relative economic positions at two points of time: while the 2<sup>nd</sup>

generation are still living at home with their parents, and later on, when the 2<sup>nd</sup> generation have moved out of the house and formed their own independent household.

The second method of calculating intergenerational mobility uses an aggregate measure from a regression equation:

$$(1) \quad \log E_i = \alpha + \beta \log y_{0i} + \varepsilon_i$$

where  $\log E_i$  indicates the logarithm of the permanent income for a child in family  $i$ ,  $\log y_{0i}$  indicates the logarithm to the parent's permanent family income,  $\varepsilon_i$  is the combined effect of factors orthogonal to the parents' income of the child's income, and the slope  $\beta$  is the intergenerational elasticity, i.e., changes in the child's permanent income in relation to changes in the parents' permanent income. The calculated elasticity indicates how large a percentage change in second generation income is generated by a 1 percent change in the 1<sup>st</sup> generation income. Hence, if the elasticity is 0.2, it means that an increase in parental income by 10% will entail a 2% greater income in relation to the average for the children, which is taken as an expression that there is a certain social persistence for the average parent-child relation. If the elasticity had been 0, there would be full intergenerational mobility, and if it had been sufficiently large, there would be no intergenerational mobility, corresponding to a situation where a known origin (relative earnings position of parent) can predict the destination (relative earnings position of child) with a high probability.

In order to account for mobility not being necessarily the same over the income/earnings distribution, elasticity is sometimes calculated for different positions, possibly within each income/earnings class. In this way, a measurement is derived for mobility which can reveal whether the mobility is, for example, larger among low-income persons than among high-income persons, and thereby where in the distribution there exists more or less significant earnings mobility.

It must be assumed that both the parents and the children must have achieved a certain connection to the labour market and thereby earnings in order to be able to use this as a measure of permanent income, cf. Haider and Solon (2005). At the same time, earnings can vary from year to year, such that average income for a longer period - the estimated permanent income - is a preferable measure. Hence, it is usual to apply both average incomes

and to correct for parents' and children's ages in order to avoid short-term variations in their incomes.

The influence of taxes and income transfers contributes to creating increased economic equality in the population and under certain conditions, can reduce or increase the effect of income mobility (Roemer *et al.*, 2003). It is therefore important to pay attention to whether income mobility is calculated using gross incomes or net incomes.

#### **IV. Data**

When measuring intergenerational mobility, it is important to be aware when, during the child's upbringing, one measures characteristics among the parents, and which age the children must have reached before one can speak of inherited factors. Hence, both generations must have reached a certain age before they can acquire an ordinary earning, which can be taken as a measure of 'permanent income'. However, this requires a completed education and a subsequent period on the labour market in order to attain a certain amount of job experience. It will thus be appropriate to compare parents and children at points in time when these conditions are fulfilled. As concerns labour market experience, however, it is important to be aware that this is acquired differently for different educational and occupational groups. Hence, the non-educated and secondary-schooled group will begin at a relatively higher starting wage than those with more advanced educations, but the salaries of the more educated group will continue to rise over a longer period.

In practice, the data determine the age at which the two generations' incomes can be compared. The necessary time series are often too short to obtain the ideal requirements to be fulfilled. Danish register data, for example, begins largely in 1980, which means that periods longer than approximately 20 years cannot be covered. In panel surveys, the time intervals are usually even shorter, such that intergenerational mobility is not permitted to fully 'develop'.

Data for this study is taken from the statistical registers of Statistics Denmark. The key analytical variable is earnings, which is estimated on the basis of the hourly wage in the year of employment and an estimate of the total number of hours worked, based on the sum of employee contributions to the supplementary labour market pension fund and the length of the employment period, supplemented with information from any unemployment and illness and an estimate of the number of hours in other employment.

The data set covers individuals who were 30-40 years old in 2002 and their parents. The earnings that were used for sons and daughters are from 2002, and the earnings estimates for their fathers/mothers are derived from average earnings from 1980, 1981, 1982, 1983 and 1984. The earnings are inflated with the consumer price index, with 2002 being used as the baseline year. In order to reduce the problem of extreme cases, we have excluded those cases where either the child's or the parent's earnings lies below the 1<sup>st</sup> percentile or above the 99<sup>th</sup> percentile. Also excluded are cases where the father/mother is below 30 years of age or over 66 years in 1980. An overview of the key statistical data from the data set is shown in table 1.

Table 1 here

## **V. Findings**

In the following, we calculate mobility for Denmark by applying the elasticity coefficients using method two. The goal here is to compare the Danish data with studies carried out in other countries.

Most studies of intergenerational mobility compare the earnings of father and son. This is because wage incomes are often the only data available, and because of a desire to avoid the influence of public and private income transfers and unearned income on the generation's economic success. Exclusion of income from self-employment is justified by the relatively great amount of uncertainty connected to the calculation of these incomes, and by the fact that they often vary from year to year. In this paper, the earnings of father and son were used as measures of intergenerational mobility. Hereby, we ignore the effect of possible unemployment, which means that there is a partial control for differences in the macroeconomic conditions during the two time periods when the father's and son's respective earnings are analyzed.

In the analyses, later on in the paper, we also examine the relationship between the relative earnings levels of father and daughter, mother and daughter and mother and son, although co-habiting partners - assortative mating – often resemble each other, and the mobility differences are therefore limited (Chadwick and Solon, 2002). Ermisch, Francesconi and Siedler (2005) show that on average 40-50 % of the covariance between parents' and own family permanent income can be attributed to assortative mating.

In table 2 we compare the earnings of 30-40-year-old sons in 2002 with their fathers' average earnings in 1980-84. It can be seen that the intergenerational persistence is greatest in the upper end of the income distribution – intergenerational mobility is lowest - which partially confirms a study by Danish Economic Council (2001).

Table 2 here

The degree to which economic intergenerational mobility is large or small is naturally a political question. The limited possibilities for executing studies of the development in economic mobility make it, furthermore, difficult to assess whether former policies and other measures have had a positive or negative effect on the extent of mobility. It is possible, however, to compare intergenerational mobility in Denmark with mobility in other countries, and thereby indirectly assess which conditions can be of significance for the extent and character of mobility in Denmark,

Several studies have been carried out on the extent of intergenerational mobility in Sweden, Finland and other European countries, as well as in the United States. Table 3 shows the findings of those studies which methodologically and in terms of data are most comparable with Denmark. Thus, we have excluded estimates of earnings for very young sons (e.g. Couch and Dunn, 1997)<sup>5</sup>, and estimates of one year's earnings for parents (e.g. Blanden *et al.*, 2005). For Sweden and Finland, mobility – the elasticities  $\beta$  – was calculated to be at about 0.22-0.28 when single-year wages for the children were used, while Norway is a little lower with a  $\beta$  estimate equal to 0.13. For Canada, elasticity is calculated at 0.19-0.26 on annual wages for children. Finally, for Germany, elasticity has been calculated to 0.30, while corresponding elasticities for the United States are between 0.33 and 0.41. In other words, earnings mobility is higher in Sweden, Finland and Canada than in Germany and the United States.

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<sup>5</sup> The calculated elasticities are much smaller and the standard deviations relatively higher, i.e. 0.11 (0.06) for Germany and 0.13 (0.06) for the US, than in other studies for these two countries; see table 3. The explanation could be that because of the sons' very young ages, 23 years and 25 years, respectively, they have not yet achieved a more permanent position on the labour market, and, thereby, a permanent income.

There are also elasticity calculations for Sweden, Finland and the US where average annual earnings of sons are applied for a period longer than just one year. These are not shown here, however, because average earnings figures at the beginning of one's labour market career are viewed as being a problematic measure for the permanent incomes (Solon, 2002).

Table 3 about here

For Denmark, we calculated intergenerational mobility for sons in relation to the earnings of their fathers using the children's earnings for 2002 (table 3). The result is a calculated elasticity of 0.24, which shows that intergenerational mobility in Denmark appears to be smaller than that of Norway, at the level of Sweden and Finland, and greater than that of Germany and the United States. In other words, the social inheritance in Denmark is equal to the Swedish and Finnish levels, and greater than in Norway<sup>6</sup>, but less than in Germany and the United States.

The comparison of the Danish findings with those of the other countries, however, has to take into account that different age delimitations were used. Therefore, we calculate elasticities on the Danish data for the different countries' age delimitations (see column  $\beta^{*DK}$  in Table 3). Then, Denmark shows a somewhat higher level than Norway and lower level of elasticity than Sweden, but still at the same level as Finland. In relation to Germany and the United States, elasticities continue to be significantly lower in Denmark. That the Nordic countries thus have a relatively limited amount of social inheritance has been attributed to less earnings inequality compared to the other countries (Danish Economic Council, 2001). In order to answer whether other factors also contribute to explaining the national differences also between the Nordic countries new studies are required.

As concerns the social inheritance of earnings between fathers and daughters, the data show that both in Denmark, Sweden, Finland (table 4) and in Canada (Corak, 2001), father-daughter inheritance is not as high as the social inheritance between father and son. In Norway, however, daughters and sons experience quite the same degree of social inheritance.

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<sup>6</sup> The high earning mobility in Norway is ascribed to several school reforms introduced with the aim of enhancing equal opportunities for different social groups including the disadvantaged (Bratberg, Nilsen and Vaage, 2005).

Table 4 about here

A similar analysis of the intergenerational mobility between Danish mothers and their children yield a mother/son elasticity of 0.076 and for daughter/mother 0.117; these figures are significantly less than the corresponding elasticity for the father's earnings (table 4). That is, the daughters' position in the income distribution tends to resemble the position of their fathers and mothers, while the sons' position resembles that of their father's position in the income distribution more than daughters' resemble father's position.

In Sweden and Finland as well, the children are less affected by their mothers' income than by their father's income; cf. table 4. An increasing educational level for the daughters in the period can thus contribute to hiding a potentially larger intergenerational social dependence. The levels for the two countries, however, are not entirely comparable with the Danish level because the elasticities for both Sweden and Finland are based on child incomes for several years.

## **VI. Conclusions**

While there is a relatively large amount of international research on intergenerational earnings mobility, there are only few Danish contributions. This study has attempted to compensate for this gap. It is important to know the size of the earnings mobility between generations because it indicates the possibility for children, independent of social origin, to be able to achieve an earning which corresponds to their abilities. At the same time, income mobility is an expression of how well the educational potential and other qualifications in the population are utilized in a reasonable social-economic way.

Earnings mobility is understood to be the association between the parental generation's position in the earnings distribution and the children's subsequent position in the earnings distribution.

The data show that if we compare the earnings of 30-40-year-old men in 2002 with that of their fathers' earnings in 1980-84, the intergenerational mobility is especially limited in the upper end of the distribution.

If we compare the elasticity estimate in Denmark with elasticity estimates in other countries, we see that elasticity between father and son is 0.24 in Denmark, 0.28 in Sweden,

0.22 in Finland, 0.30 for Germany and 0.40 for the US. This means that a 10% greater parental income in Denmark is correlated with 2.4% greater earnings for the children. Intergenerational mobility in Denmark is thus at the same level of Sweden and Finland, and larger than that of Germany and the United States.

For all four Nordic countries, intergenerational earnings mobility is greater between father and son than between father and daughter.

The relatively greater intergenerational mobility in Norway, Denmark, Sweden and Finland compared with the United States shows that the Nordic welfare model ensures relatively more equitable possibilities in society compared to other models, no matter whether one comes from privileged or less privileged backgrounds. Understanding the factors which contribute to social inheritance would be an appropriate topic for further analyses of the intergenerational income mobility in Denmark and in other countries.

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Table 1. *Key statistics for the Danish data set.*

	Mean	Std.dev.	Minimum	Maximum
<i>Sons and fathers, n=140,937:</i>				
Son's age in 2002	34.80	3.13	30	40
Son's earnings in 2002	348,400	122,300	81,600	955,700
Father's age in 1980	41.43	6.32	30	66
Father's mean earnings in 1980-1984	298,600	83,600	171,700	707,800
<i>Sons and mothers, n=126,152:</i>				
Son's age in 2002	35.04	3.11	30	40
Son's earnings in 2002	351,100	124,600	86,600	974,000
Mother's age in 1980	39.12	5.58	30	65
Mother's mean earnings in 1980-1984	216,500	50,700	101,500	448,100
<i>Daughters and fathers, n=133,466:</i>				
Daughter's age in 2002	34.86	3.14	30	40
Daughter's earnings in 2002	271,700	80,500	93,200	669,300
Father's age in 1980	41.46	6.32	30	66
Father's mean earnings in 1980-1984	299,200	84,500	172,100	712,300
<i>Daughters and mothers, n=122,546:</i>				
Daughter's age in 2002	35.10	3.11	30	40
Daughter's earnings in 2002	274,300	81,400	91,600	669,300
Mother's age in 1980	39.15	5.58	30	66
Mother's average earnings 1980-1984	216,800	50,500	101,700	444,500

Table 2. *Sons' and fathers' positions in wage earnings distributions in Denmark, percent.*

Father's quartile position in 1980-84:	Son's quartile position in 2002:				
	1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>	Total
1 <sup>st</sup>	31.9	27.4	23.1	17.6	100
2 <sup>nd</sup>	28.2	26.7	24.4	20.7	100
3 <sup>rd</sup>	23.6	25.5	25.4	25.5	100
4 <sup>th</sup>	18.4	20.6	24.9	36.0	100

Source: Own calculations base don data from Statistics Denmark.

Table 3. *Intergenerational earnings elasticities between fathers and sons in different countries.*

Country	$\beta$	$\beta^{*DK}$	Son	Father	Source
Denmark	0.24	0.24	Log annual earnings in 2002; ages 30-40 yrs.	Log mean annual earnings 1980-1984 for 30-66-year-olds in 1980	Own calculations
Norway	0.13	0.20	Log annual earnings in 1991-95, ages 31-35 yrs.	Log 5-yrs. mean earnings	Bratberg, Nilsen and Vaage (2005)
Sweden	0.28	0.19	Log annual earnings in 1990; ages 29-38 yrs.	Log annual earnings: Estimated on the basis of education and occupation	Björklund and Jäntti (1997)
Finland	0.22	0.22	Log annual earnings in 1990; ages 30-40 yrs.	Log 2-yrs. mean annual earnings	Österbacka (2001)
Canada	0.23	0.17	Log annual earnings in 1995; ages 29-32 yrs.	Log 5-yrs. mean earnings	Corak and Heisz (1999)
Canada	0.26	0.23	Log annual earnings in 1998; ages 32-35 yrs.	Log 5-yrs. mean annual earnings	Corak (2001)
Canada	0.19	0.16	Log annual earnings in 1998; age 30 yrs.	Log 5-yrs. mean annual earnings	Blanden (2005)
Germany	0.30	0.16	Log monthly earning in 2000; age 30 yrs.	Log 5-yrs. Average monthly earnings	Blanden (2005)
US	0.33	0.16	Log annual earnings in 2000; age 30 yrs.	Log 5-years average monthly earnings	Blanden (2005)
US	0.39	0.20	Log annual earnings in 1987; ages 28-36 yrs.	Log 5-years mean annual earnings	Björklund and Jäntti (1997)
US	0.41	0.12	Log annual earnings in 1984; age 25-33 yrs.	Log 5-years mean annual earnings	Solon (1992)
US	0.37	0.21	Log annual earnings in 1980; ages 28-38 yrs.	Log 4-years mean annual earnings	Couch and Lillard (1998)
US	0.54	0.12	Log annual earnings in 1981; ages 25-33 yrs.	Log 5-years mean earnings	Zimmerman (1992)

$\beta^{*DK}$ : Own calculations on Danish data, where assumptions of son's age and number of years for calculating earnings are taken from the cited studies in the 'Source' column above.

Table 4. *Intergenerational earnings elasticities,  $\beta$ , between parent and child in Denmark, Norway, Sweden and Finland. Standard deviation in parentheses.*

	Denmark		Norway	Sweden		Finland	
	Father	Mother	Father	Father	Mother	Father	Mother
Son	0.240 (0.003)	0.076 (0.004)	0.129 (0.007)	0.129 (0.011)	0.022 (0.009)	0.129 (0.005)	0.037 (0.004)
Daughter	0.204 (0.003)	0.117 (0.004)	0.126 (0.010)	0.071 (0.010)	0.036 (0.008)	0.100 (0.006)	0.023 (0.005)

Notes. Denmark: 30-40-year-olds (in 2002) sons/daughters' log earnings in 2002. 30-66-year-olds (in 1980) fathers'/mothers' log 5-years' average earnings in 1980-84. Sweden: 25-51-year-old sons/daughters and fathers'/mothers' log 3-year mean wage. Finland: 25-45-year-old sons/daughters log 3-year mean wage and fathers'/mothers' log 2-year mean wage. A correction is made for the child's and parents' ages.

Sources. Denmark: own calculations. Norway: Bratberg, Nilsen and Vaage (2005). Sweden: Österberg (2000). Finland: Österbacka (2001).