

# **Understanding the Mechanisms Behind Intergenerational Persistence: A Comparison Between the US and UK\***

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## *Abstract*

International comparisons of intergenerational mobility provide a useful starting point in understanding intergenerational mobility, but the obvious next step is to look at international comparisons of the mechanisms by which mobility is transmitted. In this paper, we create comparable datasets for the United Kingdom and United States and estimate the relative importance of different mechanisms in producing patterns of generational mobility in each nation. We find that major mechanisms associated with intergenerational mobility (and its antithesis, intergenerational persistence) such as education, occupation, health, marriage, and labor market attachment differ between these two nations in systematic ways. The differences and similarities we find suggest that for the United States, limited access to highly rewarded educational qualifications severely limits mobility, while the rigidity of the structure of occupational prestige and professional standing encourage intergenerational persistence in the United Kingdom.

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### Introduction

This paper is motivated by academic and policy interest in understanding both the extent to which intergenerational mobility (IGM) varies across countries, but also the cross-national pathways and mechanisms which combine to establish measured IGM. Existing comparisons of IGM across countries reveal the US and UK to be towards the immobile end of the ranking of advanced nations, but we know little about the similarity of the mechanisms that lead to this immobility.

Recent discussions and policy conferences have considered how the association between offspring outcomes and family background can be reduced. Educational interventions at all levels are often asserted to be the primary policy lever for increasing IGM. While this policy approach may be effective for some nations, it may not be for others; other interventions, such as, for example, active labor market policies, may dominate instead.

The standard approach to measuring IGM follows from equation 1: :

$$\ln Y_i^{\text{children}} = \alpha + \beta \ln Y_i^{\text{parent}} + \varepsilon_i \quad (1)$$

where the beta ( $\beta$ ) expresses the degree of intergenerational persistence (with the degree of IGM being one minus the  $\beta$ ). This coefficient has been estimated for numerous countries in recent years with the evidence on cross country comparisons summarized by Solon (2002), Corak (2006), Bjorklund and Jäntti (2009) and Blanden (2009).

Table 1, taken from Blanden (2009), suggests that the UK and US are clear outliers with the highest  $\beta$ s (excluding Brazil) in this careful compilation. These estimates also indicate an underlying positive relationship between income inequality and social immobility [see also Bjorklund and Jäntti (2009); Breen and Jonsson (2005); and Beller and Hout (2006)]. In terms of the relative position of

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the US and UK the figures given here suggest there is little to choose between the two countries.

Other summaries lead to slightly different conclusions, while Corak (2006) puts the best US estimate slightly below the result for the UK, the survey by Bjorklund and Jantti (2009) agrees with the harmonized results from these authors (Jantti et al, 2006) that the US is rather less mobile than the UK.

**[Table 1 here]**

Research also suggests that the US has the least income mobility from the bottom quintile, with figures from Jantti et al. (2006) shown here in Table 2 revealing that 42 percent of sons from this lowest parental category ending up in the same quintile . The UK and US do not differ appreciably from Jantti's other four nations (Denmark, Sweden, in the mobility of sons in the middle quintiles. However, in both the UK and US, sons who begin in the top quintile are less likely to emigrate to the lowest quintile, compared to the other four nations.

**[Table 2 here]**

Although notable differences and similarities in IGM are observed across nations, little is known about the mechanisms driving these patterns (Blanden, 2009). Can we assume that the lack of mobility is due to low and stagnant educational attainment, as some have asserted (Goldin and Katz, 2008)? If so, a broad mobility-enhancing education strategy may be effective in increasing IGM. Or are different factors at work, in which case, different policy prescriptions might be called for?

In this paper, we move beyond the measurement of intergenerational persistence,  $\beta$ , to attempting to understand the pathways through which parental income affects children's earnings. We accomplish this by providing a careful comparison of the mechanisms that generate the connection between parental income and children's own family circumstances later in life using harmonized US and UK datasets. We provide a detailed exposition of mechanisms linking

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generations across these two nations. We examine several pathways by which status moves from parents to offspring, including education, labor market attachment, occupation, marriage, and health. We also speculate regarding the nature of the interventions that may be effective for increasing mobility in the two nations. We begin by describing our methodology and data and then present results for men and women separately, before summarizing the results.

### **Methodology**

The methodology for determining overall mobility coefficients is laid out in equation (1) above. Following the procedures in Blanden, Gregg, and Macmillan (2007), we will decompose IGM into two parts:

- (a) One that measures the extent to which parental income is related to a pathway factor (for example, education):

$$Ed_i = \alpha_1 + \lambda \ln Y_i^{\text{parents}} + \varepsilon_{1i} \quad (2)$$

- (b) A second that measures the offspring ‘payoff’ to a pathway factor:

$$\ln Y_i^{\text{child}} = \omega_1 + \rho Ed_i + v_{1i} \quad (3)$$

The overall intergenerational elasticity is then decomposed by the formula:

$$\beta = \lambda \rho + [\text{Cov}(v_{1i}, \ln Y_i^{\text{parents}}) / \text{Var}(Y_i^{\text{parents}})] \quad (4)$$

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The first term of equation 4,  $\lambda\rho$ , is that component of  $\beta$  that can be explained by a factor (such as education, in the above example). The second term (in brackets) is the unexplained component of  $\beta$ .

We consider a variety of factors, such as education, labor market experience, occupation and marital status. All of these are taken to be important linkages between parental income and offspring adult family income. By combining the relationship of these factors to parental income and the offspring income returns associated with these factors, we can assess the contribution made by each factor to income persistence across generations, conditional on the other variables included in our specification. These contributions are then expressed as a proportion of total intergenerational persistence. Our earnings equations are built up sequentially, first considering ‘Early adult’ variables only and then adding variables collected in the early 30s; measured at the same time as our earnings information is obtained. The sequential approach means that we first evaluate the impact of education and early labour market experience before assessing how much of this contribution works through later labour market attachment and occupational prestige.

### **Data**

We use two well coordinated data sources, the 1970 British Cohort Study (BCS) for the UK and the Panel Study of Income Dynamics (PSID) for the US. The BCS began with a target sample of the population of individuals born in a week in April 1970 (around 18,000), and has a usable sample of 7,665 for our intergenerational income analysis. The PSID includes the cohort born 1960–1970,<sup>1</sup> where the sample size we achieve is 1448. We have made the two datasets as comparable as possible

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<sup>1</sup> In a previous version of this paper we restricted the comparable sample to those born between 1965-1970, by expanding the sample we have arguably lost some comparability but gained in terms of robustness. The change in sample has reduced the point estimate of overall persistence for men to one more in keeping with the literature. The relative importance of the transmission mechanisms changes very little.

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across all of the important variables for the analysis (see below). As mentioned above, the analysis is done separately for men and for women. Our measure of parental status is gross parental income, measured when child is aged 10 and 16 in both countries. Because parental income in the BCS is reported in categories, we group PSID income into comparable categories. We then average across the two measures. We measure offspring income by earnings at ages 30 and 34 as these are the adult surveys available for the BCS, again the average is used as the outcome measure of interest.<sup>2 3</sup>

We explore several mechanisms through which intergenerational income persistence may operate, including education, occupational choice, labor market attachment, health, and assortative mating. Our data do not allow us to study additional mechanisms. The pathway variables we select and harmonize are shown in Table 3. Although this is an extensive set of potential pathways, it is likely that substantial unexplained linkages remain.

**[Table 3 here]**

Offspring education is measured at age 30 and classified as less than high school graduate, high school graduate, attend college, graduate from college, and attend graduate school for the US, and classified as less than O level, O level or equivalent, A level, or degree or equivalent for the UK. According to the ISCED code, these differentiations reflect similar educational attainment in the two countries (see tables 1 and 2 at: <http://www.oecd.org/dataoecd/11/18/2765339.xls>).

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<sup>2</sup> Our earnings mobility ( $\beta$ ) is different from most studies because the parental variable is income rather than earnings. This has been done primarily because of incompatibility in parental earnings measures across the two data sets. Fathers' earnings are not reported in the BCS. However, there are also reasons why our specification may be preferred, particularly to the extent that parental income better captures social safety net programs that provide income to families. Comparisons by other offspring income measures, such as total family income and total family earnings, will be studied later.

<sup>3</sup> Clearly many of the initial sample is not used for the intergenerational income regressions. The main reason for this is attrition, by the age 34 survey the sample has fallen to 9665. To maximise the sample we include individuals who have information on only one of the parental income or own earnings' measures. 8992 have information on employment income at ages 30 or 34, and 13503 have information on parental income at ages 10 or 16. See Blanden (2005) for more information on the data and the impact of attrition and missing variables.

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We have transformed the occupation data in the PSID to map into the 8 category version of the NS-SEC system, and the BCS includes NS-SEC classification code.<sup>4</sup> Occupation is measured when the offspring has reached 34 years old. Two measures of labor market (dis-) attachment are used for two age ranges. The first captures the percentage of years during the ages of 18–24 and 25–28 when the offspring is primarily not in the labor market and not in school, while the second considers the percentage of years when the majority of the year is spent in full-time work. Self-reported health status (excellent, good, fair, or poor) measures the health of the offspring in both surveys.<sup>5</sup> The extent of assortative mating of offspring is only roughly captured in this stage of our research. We use the marital status of the offspring at age 34, and age of first marriage as marriage variables. In future work, we will use partners' education, earnings, and the presence of children to address assortative mating.<sup>6</sup>

### Limitations

Unfortunately, the PSID does not contain any measures of intelligence or noncognitive skills such as those included in the BCS. However, Blanden, Gregg, and Macmillan (2007) show that most

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<sup>4</sup> The NS-SEC classification codes are listed in Appendix A. The PSID 3-digit occupation codes were converted to the NS-SEC by manually comparing each of the 3-digit occupation codes with the criteria for the NS-SEC codes. We are thankful to Lawrence Miller for his assistance in converting the data. The NS-SEC is based broadly on the Goldthorpe social class schema see Rose and Pevalin (2005).

<sup>5</sup> Due to the nature of our analysis the categorical variables are defined as 'at least high school' 'at least some college' and 'college' (with the same approach used for occupation). If exclusive dummies were used this would lead to ambiguity in the expected relationship between parental income and the middle categories, e.g. those with high school education are well educated compared to those with no high school but poorly educated compared to the 'some college' and 'completed college' group.

<sup>6</sup> We note that this analysis is complex. For instance, Raum et al. (2007) suggest that amongst the highest SES classes, UK and US married women work the least (compared to Scandinavian and Nordic women) suggesting that married women with children and with husbands from affluent backgrounds tend to exhibit reduced labor supply in the US and the UK. In these countries, it is the combination of assortative mating *and* labor supply responses that weakens the association between married women's own earnings and their parents' earnings.

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of the effects of these variables are minimized once education is included in the analysis.<sup>7</sup> One might also question the measure of status that is used in these comparisons. While sociologists tend to use occupational class as the primary variable for measuring status, economists emphasize long-run income as a superior measure. Scholars in both disciplines often use educational attainment as the index for status in measuring IGM. In recent work comparing income, occupation, and other indices of well-being for measuring IGM, Haveman, Wilson, and Smeeding (2008) argue that income is the best performer for the United States, at least when using the PSID, although this conclusion may reflect the limited measures of social and/or occupational class available in the PSID and other comparable US datasets. In more recent work, Pfeffer (2009) argues that wealth is a better proxy of class status in the United States than either income or occupation. Janssons et al. (2009) use occupational attainment in the United States, but have no estimate for the UK.

In the UK, the preferred measure of status for IGM is less clear. Erikson and Goldthorpe (2009) have challenged the income measure underlying the findings in Blanden, Gregg, and Macmillan (2007), which findings are also at some variance with Breen (2004). The Erikson-Goldthorpe argument is that income is not well measured in the BCS and that measures the 1958 cohort, are even worse. Blanden, Gregg, and Macmillan (2009) explain that some of these differences across approaches can be explained by within-class or within-education inequalities, which are particularly large in the US compared to the UK. They also argue that social class measures do not correlate well with other measures of mobility in cross-country comparisons.

Recent UK-based studies indicate that parental income has a stronger persistence effect on offspring earnings in the 1970 BCS compared to 1958 cohort, while estimates based on occupational status suggest little change or trend in these outcomes across both cohorts (Erikson and Goldthorpe,

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<sup>7</sup> Recent research by Prozanto and Ermish (ref?) tends to reinforce this finding.

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2009 and Blanden, Gregg and Macmillan, 2009). This evidence suggests that inequality and income mobility are strongly related and that as UK inequality increased, mobility declined (Blanden 2009). Lee and Solon (2006) find no trend in income-based IGM in the United States, despite a well-known and sustained increase in inequality over the past 30 years.

In this paper, we do not attempt to resolve the issue of which index of SES to use for IGM research; important lessons can be learned from all of these literatures. Here we seek only to reveal the pathways of intergenerational mobility across nations based on income/earnings.

**Results**

We begin by establishing the simple  $\beta$ s from estimates of equation (1) as shown by our data in Table 3. All  $\beta$ s for IGM as measured by the elasticity of individual earnings with respect to parental family income are highly statistically significant. For US males, the  $\beta$  is .39, in the UK, the elasticity for men is lower at .27. The finding of lower mobility in the US is consistent with some (but not all) of the research reviewed in the Introduction, however we should also be aware of some measurement issues which might be bringing down the UK estimate. The British Cohort Study asks parents to provide information on the ‘combined gross income of the child’s mother and father’ this can be provided on either a weekly or monthly basis, in the US income is captured by adding up all sources of reported income from the previous year, it may therefore be the case that the UK income measure has more transitory variation included. The IGM for women’s earnings are very similar in both the US and UK at .34. Hence, while women are similarly mobile in both nations, men have a higher

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degree of persistence (lower IGM) in the US than in the UK.<sup>8</sup> The differences in international comparisons between genders is broadly comparable with the results found in Raaum et al (2007).

**[Table 4 here]**

We begin our decomposition analysis with men, looking first at a summary of the collective factors in Table 5 followed by a more detailed look in Table 6, where we separate the full pathway effect into the extent to which parental income is related to the pathway factor and the payoff to each pathway mechanism. We then repeat this analysis for women. We present two types of results, first for pathways of early adults ages 18–24; then for the full set of pathways. In both instances we examine how much of the overall  $\beta$  can be explained using the pathway variables in Table 3.

### Men's Results

In Table 5, we summarize the broad pathway forces that are correlated with IGM as expressed by son's earnings in both nations. The first "Early Adult" regressions explain about 40 percent of the  $\beta$  for the UK and 57 percent for the US, with this coming almost entirely through education. The full specifications account for 60 percent of the beta in the UK and 70 percent of the beta in the US.

**[Table 5 here]**

Education appears to form a more important pathway from parental to offspring status in the US than in the UK, accounting for .140 of  $\beta$  in the US, compared to .043 of  $\beta$  in the UK. In terms of percent of  $\beta$  accounted for by the education pathway, our estimate is 36 percent  $\beta$  for US compared to 16.0 percent for the UK. In contrast, occupation is a much stronger pathway in the UK than in the

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<sup>8</sup> The intergenerational partial correlation  $r = \text{Corr}_{\ln Y^{\text{parents}}, \ln Y^{\text{son}}} = \beta \left( \frac{SD^{\ln Y^{\text{parents}}}}{SD^{\ln Y^{\text{son}}}} \right)$  provides an alternative measure of mobility which is particularly useful for making comparisons. Using this measure to adjust our estimates for differing variances does changes the estimates for men very little (.27 UK, .31 US) but it does reduces the estimates for daughters to .22 (UK) and .24 (US), this is because of the larger variance in women's earnings in both countries.

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US, accounting for 33.7 percent of  $\beta$  for the UK, compared to 12.1 percent for the US.<sup>9</sup> Labor market attachment during ages 25–29 is a much more important pathway in the US than UK (two and a half times the magnitude), while early labor market experience makes a small contribution to persistence in the UK and has no impact in the US, these limited effects may be because of the close association with educational attainment; also included in these models. Later labour market attachment makes a bigger contribution, at least for the US. Health and marriage have little explanatory power as IGM pathways for men’s earnings in either nation. These results may reflect relatively crude measures of health or marriage in each dataset.

The effects of each pathway are further decomposed into two parts in Table 6: the level of the factor related to the parental attainment, and the return to the factor once obtained. The first set of columns show the coefficient estimates from a series of regressions where the dependent variable in each regression is one of the factors and the independent variable is the log of parental income; the second set of columns show the coefficient estimates from a single regression where the dependent variable is the log of offspring earnings and the independent variables are all of the factors listed.

**[Table 6 here]**

The comparisons of education across the two countries in the top bank of the table suggests that the impacts of parental income on educational attainment are about equal between the US and the UK, but that the return to these educational attainments (in columns 3 and 4) is substantially larger in the US than in the UK. The differences in returns are consistent with findings in Psacharopoulos and Patrinos (2004). These differences in payoffs are likely to be affected by differences in labor market structures, institutions, and other factors such as relative supplies of high- versus low-skill labor

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<sup>9</sup> An important aim for future work is to investigate the robustness of this finding. Some evidence is provided by the fact that the same factors remain more important in each nation when groups of variables are investigated one at a time.

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(Machin, 2009). Earnings returns to full-time work or education at ages 25–29 account for the lion’s share of this labor market estimate, even if the effect of this age-specific factor is less than 10 percent of the explained portion in each country. On the other hand, the occupational hierarchy appears to be more important in the UK, where several rungs of the hierarchy explain 10 percent or more of the  $\beta$ ; in the US only one occupational category explains 10 percent of the  $\beta$ .

As the estimated persistence in the US is higher than the UK an alternative way of viewing the results is to ask: does investigating the mechanisms help account for the lower mobility for US men? The answer to this question is ‘yes’. The total gap in  $\beta$  is .121 and the gap in the explained part of is .118. We can therefore view 98 percent of the difference in persistence across the nations as accounted for, with the larger returns to education in the US taking the main responsibility. When considered in these absolute terms, the impact of occupation in the two nations is almost identical.

### Female Results

The basic result in Table 7 is that while females have roughly the same mobility in the US and the UK, different pathways account for this mobility. In both countries a large percent of  $\beta$  can be accounted for by the pathways that we explore, and a larger percentage than for men (80 percent in both countries for women). Education is again a more important pathway for reducing mobility in the US than the UK; however, the difference is much smaller for women than men. Occupation is again by far the most important pathway reducing mobility in the UK and is three times the magnitude of the US. Indeed, occupation accounts for as much as all the other factors combined for the UK. Labor market attachment has a stronger influence on women’s persistence than men, with employment in the mid-20s especially important for women. In the current specification marriage contributes to mobility for US women as those from richer backgrounds are more likely to be married and this leads

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to lower earnings, obviously a more detailed look at assortative mating is required to expand on this result. In contrast the influence of parental background on health leads to restricted mobility and this has more explanatory power in the US than the UK.

**[Table 7 here]**

The differences in explanations for women in Table 8 are somewhat similar to those for men in Table 6. Educational effects are primarily derived from labor market rewards to educational attainment in the US as compared to parental income differentially affecting the level of educational attainment. The strength by which parental income affects education level is similar in both nations.

**[Table 8 here]**

**Conclusions and Next Steps**

There is striking consistency for men and women in the key mechanisms that help explain IGM in the two nations. In the United States, educational linkages are important, primarily because of the higher returns to education and skills. Education is somewhat less important in the United Kingdom for men and women, even if the demand for highly educated workers has grown more than the supply in both nations (see Machin, 2009, for a good review of various aspects of these differences; see Katz and Autor, 1999; Goldin and Katz, 2008, on the United States). On the other hand, we find that occupational prestige seems far more important in the UK than in the US for both genders.

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Consistent with the higher returns to educational attainment in the US, labor market attachment is a more important pathway there than in the UK, and a much larger factor for women than for men in both countries. For both genders, health and marriage have little explanatory power as between parental income and offspring earnings.

The stability of mechanisms for education and occupation for both men and women across nations lend credence to the argument that structural factors (and labor market attachment) are at work in both countries more than are male-female differences, such as glass-ceiling effects or gender discrimination. Still the effects of market work are far more important explanations for women's IGM than men's IGM, especially in the UK.

If different factors are working at different strengths across the two nations, it is unlikely that one policy prescription will fit both nations. The lack of educational attainment in the United States, especially for college graduation of low-income, low-SES children, is well-known and has been discussed in the literature (Haveman and Wilson, 2006; Haveman and Smeeding, 2006). College degree attainment in the United States for successive cohorts of men has stagnated over the past 30 years, while it has continued to increase by a small but positive amount for successive generations in the UK (OECD, 2008). President Obama has proposed a series of policies designed to increase educational attainment from preschool to university, and is offering greater tuition subsidies for both university attendance and community colleges. Many states, such as Georgia and Texas, have led the way in an attempt to increase attendance and graduation for the highest ranked secondary school graduates at their state institutions of higher learning.

In the United Kingdom, a new report on fair access to professions (Panel on Fair Access to the Professions, 2009) is recommending that greater attention be paid to professional (occupational) attainment and the social exclusivity of many high-esteem professions. The claim is that top jobs and

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professions have not only expanded, but have become more socially exclusive over the past several decades.

Both country-specific policy prescriptions seem to fit our evidence. Perhaps policy makers in both nations see accurately the factors that increase opportunity and enhance mobility across generations.

This paper represents the first step in our research. Future steps include using other measures of SES, such as total family earnings or total income, and improving the definition of variables designed to capture the linkages that we are measuring. For example, we plan to use the education level and earnings percentile of each spouse to better capture assortative mating. It seems likely that even with these steps, the basic finding of the relative importance of the educational attainment in the US, and of the occupational structure in the UK, will not be overturned. In terms of policy impact, then, efforts to increase educational attainment should receive relatively more emphasis in the US, while opening the occupational structure should be a focus of UK policy.

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**Table 1**  
**Preferred Estimates of Income Mobility**

Country	Source	Elasticity
Brazil	Dunn (2007) (scaled)	0.52 (0.011)
US	Solon (1992)	0.41 (0.09)
UK	Dearden, Machin, and Reed (1997) (scaled) and averaged with Nicoletti and Ermisch (2007)	0.37 (0.05)
Italy	Piraino (2007) (scaled)	0.33 (0.026)
France	Lefranc and Trannoy (2005) (scaled)	0.32 (0.045)
Norway	Nilsen et al. (2008)	0.25 (0.006)
Australia	Leigh (2007a) revised as in Björklund and Jäntti (2008)	0.25 (0.080)
Germany	Vogel (2006)	0.24 (0.053)
Sweden	Björklund and Chadwick (2003)	0.24 (0.011)
Canada	Corak and Heisz (1999)	0.23 (0.01)
Finland	Pekkarinen et al. (2006) Österbacka (2001) Averaged as in Björklund and Jäntti (2008)	0.20 (0.020)
Denmark	Munk et al. (2008)	0.14 (0.004)

**Source:** Blanden (2009) Table 1

**Note:** Estimates based on two-stage instrumental variables regressions are scaled down by 0.75 to allow a legitimate comparison to be made with those based on OLS and time averaging. This reflects the difference in these estimates found for the US in Solon (1992) and Björklund and Jäntti (1997). See also Corak (2006).

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**Table 2**  
**Mobility Outcomes for Men Whose Fathers Are at the Bottom and Top of the Earning Distribution**

Percentage of Men Whose Fathers Were in the Bottom Fifth of the Earnings Distribution:			
	Remained in Bottom Fifth Like Father	Climbed One to Three Steps	Climbed to Top Fifth
Denmark	25%	61%	14%
Finland	28	61	11
Norway	28	60	12
Sweden	26	63	11
<b>United Kingdom</b>	<b>30</b>	<b>57</b>	<b>12</b>
<b>United States</b>	<b>42</b>	<b>50</b>	<b>8</b>
Percentage of Men Whose Fathers Were in the Top Fifth of the Earnings Distribution:			
	Dropped to Bottom Fifth	Dropped one to Three Steps	Remained in Top Fifth Like Father
Denmark	15%	48%	36%
Finland	15	50	35
Norway	15	50	35
Sweden	16	47	37
<b>United Kingdom</b>	<b>11</b>	<b>60</b>	<b>30</b>
<b>United States</b>	<b>10</b>	<b>55</b>	<b>36</b>

**Note:** Sons in all six countries were born around 1958, and earnings of both fathers and sons were observed near age 40. Sons' earnings are generally measured between 1992 and 2002.

**Source:** Isaacs and Sawhill, 2008; Jäntti et al., 2006.

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**Table 3**  
**Pathway Variables**

	UK Data	US Data
Education	O level or equivalent A level Degree or equivalent	High School Graduate Some College College Completion
Labor Market (ages 18-24, ages 25-28)	# of yrs with no full-time work or education; # of yrs with 12 mo. full-time work or education	% yrs working <500 hours and not attending school; % yrs working 1,500+ hours or primary role is student
Occupation at age 34	7-category occupation code based on NS-SEC	7-category occupation code based on NS-SEC
Health at age 34	Excellent (33%) Poor or very poor (5%)	Excellent (29.4%) Poor or very poor (5.4%)
Marriage	Year of 1 <sup>st</sup> marriage is before 1992 Married at age 34	Year of first marriage age 22 or younger Married at age 34

First Draft—Not for quotation; comments much appreciated

**Table 4**  
**Comparison of Individual Earnings Mobility ( $\beta$ ) Across Countries**

	UK	US
Men	.2688 (.016)	.391 (.047)
Women	.3405 (.025)	.343 (.050)

First Draft—Not for quotation; comments much appreciated

**Table 5**  
**US & UK Males: Accounting for Intergenerational Mobility**

	United Kingdom				United States			
	Early Adult		Full Spec		Early Adult		Full Spec	
	Part of $\beta$	% of $\beta$	Part of $\beta$	% of $\beta$	Part of $\beta$	% of $\beta$	Part of $\beta$	% of $\beta$
Education	0.093	34.7%	0.043	16.0%	0.216	55.4%	0.140	35.9%
Labor Market 18-24	0.016	6.0%	0.007	2.5%	-0.005	-1.2%	0.001	0.3%
Labor Market 25-29			0.010	3.7%			0.039	10.0%
Occupation age 34			0.091	33.7%			0.082	21.1%
Marriage	-0.001	-0.2%	0.003	1.2%	0.011	2.8%	0.016	4.0%
Health age 34			0.003	1.1%			-0.003	-0.8%
Explained $\beta$	0.109	40.5%	0.157	58.2%	0.222	56.9%	0.275	70.5%
Unexplained $\beta$	0.150	59.5%	0.112	41.8%	0.172	44.0%	0.125	31.9%
Total $\beta$	0.269		0.269		0.391		0.391	

**Table 6**  
**US & UK Males: Details**

Factors	Parent Income Influence on Factor		Return to Factor		Decomp. of $\beta$ : Percent Variation Explained	
	US	UK	US	UK	US	UK
High school grad/O levels	0.095	0.148	0.194	0.047	4.7%	2.2%
Attend college/A levels	0.307	0.211	0.129	0.029 <sup>ns</sup>	10.2%	3.3%
Graduate college/Degree	0.239	0.181	0.344	0.166	21.0%	13.8%
<b>Education total</b>					<b>35.9%</b>	<b>16.0%</b>
Ages 18-24 No labor/educ	0.026	-0.037	0.203 <sup>ns</sup>	-0.129	1.4%	-2.6%
Ages 18-24 Full-time work/educ	-0.019 <sup>ns</sup>	0.030	0.217 <sup>ns</sup>	0.064 <sup>ns</sup>	-1.0%	-0.7%
Ages 25-29 No labor/educ	-0.026	-0.018	0.107 <sup>ns</sup>	-0.048 <sup>ns</sup>	-0.7%	0.4%
Ages 25-29 Full-time work/educ	0.044	0.024	0.952	0.373	10.7%	7.8%
<b>Labor Market total</b>					<b>10.0%</b>	<b>6.3%</b>
Occupation 1	0.122	0.147	0.294	0.194	9.2%	10.8%
Occupation 2 or higher	0.188	0.229	-0.040 <sup>ns</sup>	0.174	-1.9%	14.1%
Occupation 3 or higher	0.202	0.224	0.295	-0.056 <sup>ns</sup>	15.3%	-4.5%
Occupation 4 or higher	0.211	0.226	-0.195	0.046 <sup>ns</sup>	-10.5%	4.1%
Occupation 5 or higher	0.186	0.148	0.120 <sup>ns</sup>	0.187	5.7%	12.6%
Occupation 6 or higher	0.091	0.069	-0.002 <sup>ns</sup>	-0.055	0.0%	-1.5%
<b>Occupation total</b>					<b>21.1%</b>	<b>33.8%</b>
Married age 22 or less	-0.149	-0.022	-0.050 <sup>ns</sup>	0.023 <sup>ns</sup>	1.9%	-1.1%
Married at age 34	0.078	0.040	0.101	0.095	2.0%	-0.4%
Health poor	-0.017 <sup>ns</sup>	0.062	0.016 <sup>ns</sup>	0.031	-0.1%	0.4%
Health excellent	-0.096	-0.015	-0.030 <sup>ns</sup>	-0.073	-0.7%	0.4%
<b>Total Percent Variation Explained</b>					<b>70.5%</b>	<b>58.2%</b>

Note: The omitted, comparison factor for each categories are: high school dropout/no O levels, part-time worker, occupation=7, and health good/very good. As discussed in the text, the categorical variables are coded as 'at least' high school etc.

**Table 7**  
**US & UK Females: Accounting for Intergenerational Mobility**

	United Kingdom				United States			
	Early Adult		Full Spec		Early Adult		Full Spec	
	Part of $\beta$	% of $\beta$	Part of $\beta$	% of $\beta$	Part of $\beta$	% of $\beta$	Part of $\beta$	% of B
Education	0.162	47.4%	0.058	17.1%	0.172	50.1%	0.093	27.2%
Labor Market 18-24	0.049	14.2%	-0.004	-1.2%	0.080	23.4%	0.026	7.5%
Labor Market 25-29			0.069	20.3%			0.077	22.5%
Occupation age 34			0.143	41.9%			0.072	21.1%
Marriage	0.005	1.3%	-0.005	-1.3%	0.017	4.9%	-0.038	-11.0%
Health age 34			0.001	0.3%			0.043	12.5%
Explained $\beta$	0.215	63.0%	0.263	77.1%	0.269	78.3%	0.274	79.7%
Unexplained $\beta$	0.126	37.0%	0.078	22.9%	0.083	24.1%	0.070	20.5%
Total $\beta$	0.341		0.341		0.343		0.343	

**Table 8**  
**US & UK Females: Details**

Factors	Parental Income Influence on Factor		Return to Factor		Decomp. of $\beta$ : Percent Variation Explained	
	US	UK	US	UK	US	UK
High school grad/O levels	0.094	0.143	-0.061 <sup>ns</sup>	0.030 <sup>ns</sup>	-1.7%	1.2%
Attend college/A levels	0.246	0.209	0.052 <sup>ns</sup>	0.092	3.8%	5.6%
Graduate college/Degree	0.210	0.195	0.410	0.178	25.1%	10.3%
<b>Education total</b>					<b>27.2%</b>	<b>17.0%</b>
Ages 18-24 No labor/educ	-0.073	-0.068	0.031 <sup>ns</sup>	-0.134	-0.7%	2.6%
Ages 18-24 Full-time work/educ	0.099	0.080	0.281	-0.164	8.1%	-3.8%
Ages 25-29 No labor/educ	-0.075	-0.053	-0.361	-0.178	7.9%	2.6%
Ages 25-29 Full-time work/educ	0.067	0.092	0.748	0.651	14.5%	17.6%
<b>Labor Market total</b>					<b>30.0%</b>	<b>19.1%</b>
Occupation 1	0.089	0.093	0.359	0.209	9.3%	5.6%
Occupation 2 or higher	0.206	0.198	0.020 <sup>ns</sup>	0.289	1.2%	16.7%
Occupation 3 or higher	0.206	0.187	0.129 <sup>ns</sup>	0.061 <sup>ns</sup>	7.7%	3.2%
Occupation 4 or higher	0.178	0.185	-0.035 <sup>ns</sup>	0.103 <sup>ns</sup>	-1.8%	5.6%
Occupation 5 or higher	0.171	0.143	0.039 <sup>ns</sup>	0.180	2.0%	7.6%
Occupation 6 or higher	0.114	0.052	-0.126 <sup>ns</sup>	0.189	4.2%	2.9%
<b>Occupation total</b>					<b>21.1%</b>	<b>41.9%</b>
Married age 22 or less	-0.139	-0.050	-0.021 <sup>ns</sup>	0.013 <sup>ns</sup>	0.9%	-0.3%
Married at age 34	0.153	0.038	-0.266	-0.103	-11.8%	-1.2%
Health poor	-0.048	-0.004 <sup>ns</sup>	-0.294	0.002 <sup>ns</sup>	4.1%	0.0%
Health excellent	0.111	0.031	0.256	0.033	8.3%	0.3%
<b>Total Percent Variation Explained</b>					<b>79.7%</b>	<b>77.1%</b>

Note: The omitted, comparison factor for each categories are: High School Dropout/No O levels, part-time worker, occupation=7, and health good/very good

**Appendix A**  
**NS-SEC Classifications**

<i>NS-SEC Code</i>	<i>Description</i>
<b>1</b>	<b>Higher managerial and professional occupations</b>
<b>2</b>	<b>Lower managerial and professional occupations</b>
<b>3</b>	<b>Intermediate Occupations</b>
<b>4</b>	<b>Small employers and own account workers</b>
<b>5</b>	<b>Lower supervisory and technical occupations</b>
<b>6</b>	<b>Semi-routine occupations</b>
<b>7</b>	<b>Routine occupations</b>