

OCCUPATIONAL MOBILITY IN GERMANY AND BRITAIN

Malcolm Brynin and Simonetta Longhi
ISER
University of Essex
Colchester CO4 3SQ
UK

Preliminary

This draft: 20 June 2008

Introduction

Occupational mobility has been treated in a number of different ways in the literature, whether in sociology or economics. It tells us something about occupational change, clearly, but more specifically, whether this is beneficial for the average individual or not. Within economics the general importance of the idea of equilibrium in markets, given a long-term improvement in productivity, suggests a tendency towards job enhancement. Job changes should on average therefore have a positive effect on the worker. This has been contested. For instance Green (2006) argues that technological change, in particular through computerisation, has led to work intensification. Sociology tends to be more negative still, reflecting a tendency to see the employment situation as potentially exploitative. Globalisation has in this view degraded employment prospects, in which case we would perhaps expect to see job changes associated with negative outcomes.

There are two ideas here: job change and occupational change. These might occur in the same transition, but need not: occupational change requires a job change (whether with or without the same employer) but the reverse does not apply (for instance, an academic changing university). Most analysis and discussion by far is of job change, which relates to the last two categories. This brings into play important issues such as job tenure and whether this is falling, and job mobility. The latter might be positive, neutral or negative, though whatever the outcome it might lead to a loss of firm-specific human capital. When we come to consider occupational change this loss of human capital is potentially much higher. Yet this has been the subject of far less study. The outcome of research based on this appears to view occupational change as a negative either generally or at least for large groups of people. Kambourov and Manovskii (2008) and Parrado, Caner and Wolff (2006), both of which use the PSID in the US, find very considerable occupational change at the 3-digit level, of 7-11% (Parrado *et al*) and, estimated differently, 18% in the case of Kambourov and Manovskii (2008). This is important as “a substantial amount of human capital may be destroyed upon switching occupation or industry” (Kambourov and Manovskii 2008: 41). Parrado *et al* find that this movement is associated with lower earnings, even controlling for selection effects (more able workers selecting into better jobs and therefore being more likely to stay in these jobs), but nevertheless the loss is smaller when the latter is taken into account. In addition, the earnings loss

was smaller in the 1980s and in the 70s, implying the possibility of a long-term decline in the effect.

A basic problem occurs in such analysis through uncertainty over how to define occupational change. Both of the above papers simply use differences in occupational codes over time. Their assessment of the reliability of this change appears to derive from the fact that the original one and two-digit codes were retrospectively recoded to three digits, and in the process information about past and future jobs was used to decide cases. Putting aside the relatively small possibility of real change being brushed out as a result, this ignores the likelihood that codes are simply misrecorded or, more likely, jobs miscoded. Kamourov and Manovskii recognise this problem insofar as they point out that some job switches might be minor (for instance from salesman to sales manager) and not entail a loss of human capital (2006). Perhaps more important, though, is that the same job might be differently described over time (for instance an IT specialist could be coded as an electrical engineer next time). It therefore seems advisable to incorporate some measure of *job* change, perhaps restricting occupational change to those people who report a job change. This leads to further problems, as different respondents will undoubtedly interpret job change in different ways. But it will undoubtedly reduce the measure of spurious occupational change.

It also means that the combination of job and occupational change produces several categories of overall change. We summarise these in Table 1, where we define a change of job as a move between employers (which need not be how a survey or how respondents define it).

Table 1: Combination of job and occupational change

Change of occupation	Change of job	
	Yes	No
Yes	Change of employer or promotion or demotion with same employer	Measurement error
No	Revolving door	No change

The first cell (occupational plus job change) describes a change in the nature of the job. However, measurement error might lead to a spurious change of occupation; indeed this is more likely the greater the specificity of the code, as in the above studies, which use three digits. The outcome is reflected in the second cell, where we assume that an occupational change must entail a job change (though this would not be the case if a survey defines a job change as a change of employer, as promotions and demotions with the same employer, which must result in a change of occupation (unless defined entirely by a change in wages), would not count as a change of occupation. The third cell denotes changes of job where no occupational change occurs, such as a teacher moving between education providers. Revolving doors in fact, though describe particular sorts of jobs where people have highly marketable skills such as in some forms of IT work. They often change employers, perhaps sometimes for minor advantage, and therefore have low rather than high job tenure. Their loyalty is said to be to the profession rather than to those who employ them.

In the analysis below we accept as occupational changes only those cases where a job change is reported. We thus not only use a tighter measurement of

occupational change than the above papers, reducing the amount of spurious change, but also go further in distinguishing occupational from job changes. We ask whether the loss of human capital truly occurs in *occupational* change or is a feature of all job mobility. To do this we use the German Socio-Economic Panel (GSOEP), which not only has the appropriate occupational codes but also asks respondents whether they have changed jobs. Where they say yes, are their circumstances negative or positive?

The nature of occupational change

The positive negative distinction is important. The total flux that we observe in an economy, for instance through labour turnover, does not tell us whether the degree of change this describes is good or bad. For instance, a significant (though not large) fall in job tenure has been noted in recent years. This is taken to indicate job insecurity. But at least in times of economic growth shorter tenure could result from workers being able to promote their careers through switching jobs, which they can do in a buoyant job market. This does not apply to moves out of the occupation. When we observe these, therefore, they are more likely to result from a genuine instability in the occupation. Alternatively, the idea of ‘flexicurity’ argues for the success of the relatively liberal economies (for instance, Ireland and the UK, but also including Denmark) in producing jobs through liberalisation, so decreased tenure marks a generally increase in opportunity. Much the same problem applies, if less so, in assessing the significance of part-time work, which might indicate reduced opportunity or an aspect of demand.

Opposed to the idea that we are witnessing a decline in security of work through globalisation and liberalisation is the older insistence that technological change continues to be effective and to generate consistent productivity rises over time. So the conditions of work have not deteriorated. Interestingly, such change can also not be measured by changes in job tenure or part-time work.

The interest in occupational switches cuts across two main themes: career mobility and job flexibilisation. Occupational mobility is interpreted as inter-generational changes in occupational status or wages or, within generations, in terms of career. Here the focus is on career, which is less often studied. Clearly it is expected that people in general move up the social hierarchy, occupational ladder, or in terms of real wages, over their careers, and career progression is known to be higher the higher the level of education. However, the literature on job uncertainty but also on mismatches (for instance, as a result of overqualification) suggests problems of career adjustment over time, which from an individual’s point of view might even over the long term be partial or incomplete. Such mismatches can of course be random, but they might also be structural, arising from problems in the relationship between the systems of education and training on the one hand and the labour market on the other. If the two tend not to mesh well, as has sometimes been argued (more in some countries than in others) then we might expect career to reflect a process of adjustment for some but failed adjustment for others.

It has also been argued that globalisation is leading to increased career uncertainty, and in this case too we might expect losers as well as winners. The former would be a group of workers who do badly in face of increased flexibilisation. Flexibility is often thought of in terms of distinct elements – *numerical* flexibility (greater employer control over the numbers employed or their hours) and *functional* flexibility (greater manipulation of work processes). However, as stated above, many

aspects of such changes are ambiguous. We do not know if they stem from changes in demand or supply. Here, therefore, we consider *career* flexibility, which we define not as job mobility (changes in occupational status), or as job turnover, but as switches between occupations over an individual's career (though change in industries is also possible). While we can assume that this must contain a significant voluntary element, it also seems likely, because skills are not easily transferable across occupations, that such movement can be the result of occupations becoming relatively unattractive.

Data and methods

We use the German household panel, but begin with a look at the European Community Household Panel (ECHP). The latter allows less detailed examination because occupational data is more limited, and also because the panel itself is much shorter. The advantage of the ECHP is that it allows the comparison of a large number of European countries. The main analysis however uses the German panel. We look at 'West' Germans only and all the analysis is constructed in terms of change across pairs of waves. Our aim is to distinguish between those who change job and those who do not, in the first instance, and in the second, using the subset of job-changers, comparing those who only change job to those who also change their occupation.

Given that we believe it is incorrect to denote occupational moves simply by differences in occupational codes over time, we only count those where the respondent says a job move has taken place. Even then there is clear measurement error, or at least some problems in interpreting the data (for instance, some people who claim not to have moved appear to answer questions describing the nature of the move). We include moves between employment and self-employment but exclude all transitions in and out of the labour market.

Our expectation is that occupational moves will reflect more negative aspects of employment, for instance, moving between positions with poor job security. We test this through using the information in the panel on overqualification and by looking at responses to the questions comparing the current to the old job (for instance, is the new job more secure). We do so descriptively and then through logistic regressions, where the dependent variable is, first, any job move compared to no move and, second, an occupation against only a job move. We have repeated this basic analysis using proportional hazards models but at this stage prefer to use the simpler models. After this, we construct wage equations where we model the log of wages on these changes in employment, including the lag of wages as an explanatory variable.

Results

The nature of job and occupational changes

First we examine switches between occupations in the ECHP (therefore excluding all moves out of the labour force, and, except through the use of longitudinal weights we also do not take account of the possibility that people in different occupations are liable to contribute to survey attrition differentially). Table 2 shows changes over two years (waves 1-8). This shows a great deal of occupational change, which varies by both occupation and country. In the case of occupations, only professional people

show a high level of stability: the average percentage of workers in the same occupation in wave 1 and in wave 8 is 75.4. The least stable are those in elementary jobs, where only 45.9% are in the same occupation in wave 1 and in wave 8.

In terms of countries we see that while France and Germany have a high level of stability (the average across occupations is 79.5% for France, and 65.6% for Germany), Belgium, Italy and the UK show very low levels of stability (the average across occupations is 44.1% for Belgium, 54.9% for Italy and 57.5% for the UK)

Table 2: Percentages of workers remaining in same occupations ECHP wave1-wave 8

	Germany	Denmark	Netherlands	Belgium	France
Senior manager	44.6	77.0	52.9	50.3	82.1
Professional	79.2	80.4	68.0	53.9	80.7
Technical	73.7	76.1	56.5	39.5	78.4
Clerical	67.5	77.6	54.8	62.9	82.4
Service	63.2	70.8	45.0	48.6	78.7
Skilled	74.8	74.8	67.1	37.5	82.7
Less skilled	67.3	70.2	67.5	40.3	77.5
Elementary	54.7	58.2	38.2	20.0	73.6

	UK	Ireland	Italy	Greece	Spain	Portugal
Senior manager	63.8	71.2	43.0	49.2	52.4	38.3
Professional	63.0	81.1	78.8	81.8	81.4	81.6
Technical	52.2	52.9	43.4	44.2	59.2	41.7
Clerical	61.9	64.1	75.4	69.6	43.9	66.3
Service	60.6	54.8	54.9	62.8	62.2	52.8
Skilled	63.8	59.7	61.7	74.8	65.5	74.2
Less skilled	57.4	60.7	47.1	68.3	58.8	57.2
Elementary	37.0	43.5	35.2	51.4	48.5	44.4

We now provide some descriptive information for the GSOEP enabling us to compare the different employment situations over time. First, we note that across pairs of waves, and where employment of at least ten hours a week is recorded in each instance, 89.5% of the sample does not change job, 6.2% changes job, and 4.3% change both the job and the occupation (and these figures vary little by gender). Thus, the restriction of occupation changes to cases where the job has also changed (rather than to a change of occupational code only) considerably reduces occupation switches in Germany compared to the US, where the percentages have been estimated to be possibly as high as 18% (see Kambourov and Manovskii, 2008). But some of this also reflects a difference in the nature of employment. We would expect more occupational change in the US, given its more liberal employment structure. While we reduce the measure of occupational change it seems important to compare this not to non-changers but to movement between jobs. These two different types of change may mean different things. If they do not, then occupational change *per se* is not of interest. The above figures show that job changes are about 50% more common than occupation changes.

There are no gender differences but there are slight educational differences between the three groups. For instance, 46.6% of non-changers have a very low level

of education, which falls to 36.6% for job movers but rises to 40.8% for those who change occupation. This is our first indication that occupational moves are associated with negative characteristics, though of the person rather than of the job. We now look at aspects of the job, comparing job to occupation movers and using the information provided on whether the change improved or worsened pay, job security, job prospects, and the use of skills (we exclude the figures for those where conditions had remained the same).

Table 3: Percentages of job and occupation movers saying various aspects of their job had got either better or worse

	Job change only		Occupation change	
	Improved	Worsened	Improved	Worsened
Type of work	49.9	8.1	57.6	11.0
Pay	53.5	13.2	54.7	18.1
Job security	27.4	8.8	34.9	10.3
Prospects	36.0	9.6	42.1	12.5
Use of skills	39.3	12.3	37.4	21.7
<i>Minimum observations</i>	6003		4299	

While it is clear that all changes are more likely to be associated with improvement than with deterioration of perceived conditions, there is also a difference between the two types of change. With the exception of use of skills, those who change occupations are more likely to assert an improvement in the job relative to those who change jobs without an occupational switch. This implies some sort of promotion. However, at the same time, on all dimensions, and especially in respect of use of skills, we can see that those who change occupations are more likely to experience a worsening of their conditions. Thus, there appears to be a considerable degree of polarisation in these outcomes, with occupational moves implying both upgrading and downgrading relative to job moves only.

In the next stage of the analysis we model these various transitions. Indeed, we perhaps over-model them. As our interest is in seeing whether the differences revealed in Table 3 hold up we include as many possible controls as possible, including some which are fairly strongly correlated. Table 4 shows two logistic regressions, the first comparing all movers to non-movers and the second occupation movers to job movers (the figures are in terms of odds ratios). The latter sample is of course much smaller, but it includes the information shown in Table 3, which is not asked of non-movers and so does not appear in the first regression. We control for education but also, correlated to this, social class (a grouping of occupations based on the Goldthorpe schema). The point of the latter is that movement is more or less likely depending on what type of job you are in, regardless of education. (We also tried groupings simply based on major groups – i.e. two digit occupations – and this makes no practical difference to the results.) We include the log of current pay too, also clearly correlated both to education and to social class. And related to education, we include information on overqualification. We would expect the overqualified to be more likely to change occupation.

Several of the variables refer to the past and to the current job, indicating both push and pull factors. Thus we include current hours and change in hours; and the overqualification variables describe the effect of switches between being matched,

overqualified or underqualified. This is therefore not in any way a casual analysis. The changes are simultaneous. They describe the outcome of the change only.

Table 4: Job and occupation movers compared to non-movers and occupation movers compared to job movers (logistic regression, robust standard errors)

	<i>All movers</i>	<i>Occupation movers</i>
Age	1.02	1.05
Age squared	0.99**	1.00
Male	1.07	1.42***
Married	0.83***	1.05
Real Schule	0.98	0.93
Abitur	1.00	0.81
Degree	0.97	0.88
High service class (previous job)	1.40***	0.83
Low service class	1.36***	0.90
Clerical	1.27**	0.47***
Self-employed (employer)	1.25***	1.52***
Other self-employed	0.69*	1.81*
Skilled	1.01	0.58***
Tenure (previous job)	0.92	1.01*
Firm size	1.00	1.00
Hours	1.01***	0.99(*)
Increase in hours	1.01*	1.00
Log current hourly pay	0.86*	0.60***
Stay matched (by skills)	1.00	0.70*
Matched to overqualified	3.51***	1.42
Matched to underqualified	3.24***	2.09*
Overqualified to matched	4.24***	1.03
Stay overqualified	0.97	1.32
Job better		1.58***
Job worse		1.22
Pay better		1.11
Pay worse		1.38**
Prospects better		1.24*
Prospects worse		1.01
Security better		1.32***
Security worse		1.32*
Skill use better		0.92
Skill use worse		1.80***
<i>Pseudo R squared</i>	<i>.12</i>	<i>.07</i>
<i>Observations</i>	<i>78738</i>	<i>6664</i>

(*) significant at 10%, * significant at 5%, ** significant at 1%, *** significant at 0.1%; standard errors are clustered by individuals; other controls: dummies for social class

Movement of any sort is likely to be male and above all by the self-employed who are themselves also employers. The self-employed who have no employees are relatively

unlikely to move, but where they do they are more likely to be changing occupation rather than simply changing jobs. Virtually all classes are more mobile in terms of jobs than the low skilled (the reference category) but where a change occurs only the self-employed are more likely to change occupations than are the unskilled.

Movement across occupations is most likely amongst the self-employed and those with low skills (though education *per se* seems to make no difference, at least with this sample size). This outcome is reinforced by the fact the higher the log of *current* hourly pay the less likely a move is to have taken place, and within moves, the less likely to be a change of occupation. Whether or not the move is to a higher pay than before, it remains relatively low. The figures might suggest that people might accept a cut in pay to move to a better job, with better prospects.

The overqualification variables are not easy to interpret. Certainly, staying matched by skills implies staying in the same job but where a move occurs it is less likely to describe a change of occupation. Switches between matched and non-matched (over or underqualified) seem more common for both the broad job moves and the more specific occupational moves. The latter therefore seem to be particularly ‘turbulent’. When we focus on solely this form of change, in the second column, the polarisation shown above is again visible, despite the addition of the controls. Generally, occupational moves are both more and less beneficial in terms of the conditions of work. Of particular note, though, is the high odds ratio for a worse use of skills compared to the previous job.

The wage effects of a move

The above shows some of the individual and job characteristics associated with moves. It appears that those who change occupation are likely to have relatively poor working conditions, possibly where job security is poor, as it might often be in the case of self-employment, but certain characterised with by low skills of jobs where they are unable to use what skills they have effectively, and also where pay is relatively low. Yet these changes of occupation, while they appear to bring some improvement for most, actually make things worse for some. While this would apply to a very small proportion of the labour force, it suggests that life is tough, and tough over time, for this small hard core of workers. When we look at a more objective indicator, their hourly pay, do we see the same sorts of results? In Table 5 we present the results of two wage equations, where included in the explanatory variables are the two sorts of change described above. The controls clearly do not tell us anything about the relationship between these changes and pay, but they help make this relationship more precise.

The first column covers the whole sample and is simply a standard wage model (though lacking an effective indicator of experience). Most of the variables produce the expected results, with the exception of marriage. We include hours (and change in hours) even though the dependent variable is hourly wages, because the issue of change of time is important). There appears to be a negative correlation between hourly wages and changes in hours. Both this result and the effect of marriage might be the result of the inclusion of the lag of hourly pay as an explanatory variable, as what we are really explaining is the increase in hourly pay. This is especially important in respect of the remaining variables. Becoming overqualified (presumably through taking on a less demanding job) has a negative effect but staying overqualified even more so. Becoming matched has a positive effect, showing the possibility of adjustment over the career, at least for some. Finally, the move itself, shown in the penultimate row of coefficients, has a positive

effect. People who move gain a pay increase relative to stayers – though we do not know why (are they moving to better jobs, are they more capable and motivated, are they establishing themselves in their career more effectively?).

When we isolate movers in the second column and compare those who change occupation to those who change job, we find precisely parallel effects for the controls (that is, down to the log of hourly pay). Indeed, the overqualification variables are broadly the same; however, the penalty for overqualification is now much greater while the move from this state to being matched produce no clearly beneficial result. Finally, the effect of the move itself attracts a negative coefficient. All in all, we observe negative effects for switches of occupation – though again we do not know if this reflects a differential in ability and motivation, or in other circumstances, or in career timing.

Table 5: Effect of all job move and of occupation moves on the log of hourly wages (OLS, robust standard errors)

	<i>All</i>	<i>Movers</i>
Age	0.005***	0.021***
Age squared	-0.0001***	-0.0003***
Male	0.042***	0.061***
Married	-0.009***	-0.018*
Real Schule	0.019***	0.012
Abitur	0.059***	0.106***
Degree	0.103***	0.178***
Tenure (previous job)	0.002***	0.001*
Firm size	0.018***	0.033***
Hours	-0.001***	-0.001*
Increase in hours	-0.018***	-0.010***
Log previous hourly pay	0.772***	0.564***
Stay matched (by skills)	0.019***	0.022(*)
Matched to overqualified	-0.022**	-0.080***
Matched to underqualified	0.012	-0.037
Overqualified to matched	0.036***	0.013
Stay overqualified	-0.039***	-0.105***
Job (col 1)/occupation (col 2) move	0.029***	-0.034***
Constant	0.069***	1.134***
<i>R squared</i>	.74	.56
<i>Observations</i>	78805	7216

(*) significant at 10%, * significant at 5%, ** significant at 1%, *** significant at 0.1%; standard errors are clustered by individuals

Conclusions

We have suggested that movement between occupations reflects a loss of human capital which is likely to be driven by negative ‘push’ factors and the results appear to bear this out. Some job movers gain and seem to move for positive reasons, but occupational movers seem to be polarised between winners and gainers, with the latter predominating in terms of aggregate effects. Occupational mobility appears to reflect job uncertainty, even in West Germany.

This analysis is preliminary. We intend to go further in trying to establish causality (do the effects reflect the nature of the job or of the person?). We also plan to compare Germany to the British case where possible through use of the BHPS, though exact replication is not possible. We would expect to find greater ‘turbulence’ in Britain and stronger negative effects for occupational moves.

References

- Green, F. (2006) *Demanding Work. The Paradox of Job Quality in the Affluent Economy*. Princeton, Princeton University Press
- Kambourov, G. and Manovskii, I. (2008) Rising Occupational and Industry Mobility in the United States: 1968-97. *International Economic Review* 49(1): 41-79.
- Parrado, E., Caner, A. and Wolff, E.N. (2007) Occupational and Industrial Mobility in the United States. *Labour Economics* 14: 435-455.