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Consequences of Job Mobility for the Subsequent Earnings at the Beginning of the Employment Career in Germany and the UK

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Abstract

Using the German Socio-Economic Panel 1984 – 2006 and British Household Panel Survey (BHPS) this paper investigates job-to-job mobility (direct job mobility) and job mobility via unemployment (indirect job mobility) at the beginning of the employment career in Germany and the UK. The analyses show that, in Germany's rigid labour market, direct voluntary job mobility brings permanent income rewards. Indirect job mobility, on the other hand, has a long-lasting scar effect for voluntary job movers. In contrast, in the UK not only voluntary direct job mobility but also voluntary indirect job mobility is rewarded by income gains.

JEL Classifications: J4, J5

1. Introduction

The beginning of the employment career is very often associated with intensive job mobility creating path dependencies that might have a long-lasting impact on future career development. In the first years of an employment career many job beginners might change their employer in order to achieve a better job match (Ryan, 2001; Jovanovic, 1984). Depending on the kind of job mobility (direct change of employer or via unemployment) and institutional settings, job mobility might have a negative or positive impact on the future career. While searching on-the-job (direct job mobility) is usually associated with wage increases there are competing hypotheses concerning job mobility via unemployment (indirect job mobility). On the one hand, *search*

* The data used in this paper were extracted using the Add-On package PanelWhiz v2.0 (Sep 2006) for Stata (Haisken-DeNew and Hahn 2010). PanelWhiz was written by Dr. John P. Haisken-DeNew (john@panelwhiz.eu). The following authors supplied PanelWhiz SOEP Plugins used to ensure longitudinal consistency: John P. Haisken-DeNew (29), Markus Hahn and John P. Haisken-DeNew (18).

and matching models imply that at least a *voluntary* unemployment phase might be used for an active job search and might result in higher earnings (Kahn/Low, 1982). On the other hand, *human capital* theory predicts wage losses because of the devaluation of job-specific human capital (Becker, 1962). Unemployment might also serve as a *signal* for employers to differentiate between 'good' workers and 'bad' workers (Gibbons/Katz, 1991). From this perspective, job mobility via interruption (e.g. unemployment), especially for people caught in the secondary labour market or in mismatched positions, reflects job-hopping between insecure and poorly paid jobs. The theories have mainly been applied in flexible labour markets (Abbring et al., 1998; Kahn/Low, 1982; Boheim/Taylor, 2000), and there have been few studies conducted on *job beginners* in countries with rigid labour markets like Germany's (The exception is a study provided by Davia, 2005). We believe however that these theories might have a different impact in different institutional settings. While in a rigid labour market environment unemployment might have a negative impact on future career development, in a flexible labour market unemployment might have no negative or even positive effect on future career development. For these reasons, we selected two countries, Germany and the UK, representing two different institutional settings. In the following we will (re-)formulate the hypotheses for direct job mobility and indirect job mobility by focusing on the early career since job mobility at the beginning of the employment career might have different implications than in the later phases of the employment career (Arulampalam et al., 2001; Gregg, 2001). Since search and matching theories were formulated for voluntary job mobility we will also investigate the reasons for job termination by voluntary job moves.

2. Job Mobility Theories and the Institutional Context

While Germany is associated with an exceptionally tight linkage between individual education and job status, this linkage is rather weak in the UK (DiPrete et al., 1997; Gangl, 2004). The structure of the educational and vocational system, embedded in a coordinated market economy in Germany, creates a strongly skill- and occupation-based labour market (Soskice, 1999). Both sides, employee and employers, are interested in a good match, which allows employees to amortize their training costs and save employers on-the-job training costs. Thus, in the German context, strongly skill-based allocation patterns provide relatively high *starting wages*. *Stabilization* of earnings trajectories is achieved not only through a highly skill- and occupation-based labour market, but also through the specific combination of labour market institutions (DiPrete, 2003; Gangl, 2003; 2004). Among other institutional factors, high em-

ployment protection legislation (EPL) combined with elaborate legal constraints on employers might play a substantial *stabilizing role for earning trajectories* for those starting in adequate positions because they reduce inter-firm mobility and foster internal job promotions. Recent studies consistently indicate that high EPL is associated with a low level of overall mobility and turnover in the labour market (DiPrete et al., 1997; DiPrete et al., 2001; Gangl, 2003). In contrast, wrongly allocated workers may be trapped in poor positions with few chances of improving their starting positions.

The British employment system can be classified as an uncoordinated market economy with decentralized and dualistic industrial relations. Low-trust relationships involve easily monitored and interchangeable workers who have limited scope for influencing firm-internal decisions (Soskice, 1999). EPL is the weakest in Europe, enabling employers to screen for promising workers and dismiss less promising workers (OECD, 2004). Because of weak EPL and weak linkage between vocational and occupational system starting wages are relative low for job beginners but increase with job tenure. Many job beginners start their first jobs in inadequate positions with the prospect of working their way up to better and more qualified positions (Oppenheimer / Kalmijn, 1995).

The rewards of job mobility depend on whether the job search occurs on-the-job or off-the-job. Given the institutional context of Germany and the UK in the following section we will discuss the consequences of direct and indirect job mobility on future wages.

Direct Job Mobility

In its original version the search and matching models were formulated for the off-the-job scenario and the job offer is accepted if the offered wage is higher than the reservation wage (McCall, 1970). To integrate the off-the-job model with the on-the-job model Burdett (1978) introduced two reservation wages X and Y (with $X < Y$) in his model. An unemployed worker will accept a job offer if the offered wage is greater than X. If they accept the job offer and the wage offer is less than the reservation wage Y, the worker will continue the job search on-the-job. Given that many career beginners might start in a mismatched position with a wage offer above reservation wage X but below the reservation wage Y the on-the-job search model would predict positive outcomes. Particularly at the beginning of the employment career, workers explore their own productivity and quit those jobs where they are unlikely to experience increases in productivity with tenure (Jovanovic, 1984). The explanation for direct voluntary job mobility in both countries is therefore straightforward: searching on-the-job provides employees with information about the wages of the new job and they switch jobs only if the new job offers better earnings than their current job. *Thus, compared to the stayers, the wages of direct movers*

should increase in both countries. Because we argued that at the beginning of the employment career in the UK poor positions are more common than in Germany and that institutional settings in the UK are less maintaining than in Germany, *we expect that the rewards for direct voluntary job mobility in the UK should be higher than in Germany.*

Indirect Job Mobility

While outcomes of direct job mobility have the same rationale for both countries, outcomes for indirect job mobility might be different in both countries. Human capital and signalling theories predict negative outcomes of unemployment phase. Human capital theory argues that job termination is associated with income losses, not only because of the permanent loss of company-specific human capital, but because it also precludes the accumulation of work experience and leads to a deterioration of general skills. Unemployment might also be a *signal* of an employee's low productivity. Lacking information about worker's productivity, employers seek signals which may convey information about the employee (Gibbons / Katz, 1991).

In contrast, the search and matching models argue that *at the beginning of the employment career*, an unemployment phase might be a part of normal ongoing job relocations and have no or even a positive effect on subsequent earnings. The proponents of this view argue that the search and mobility costs of unemployment are compensated by increased wage gains resulting from a more intensive job search (Kahn / Low, 1982).

Confronting *human capital and signal models with search and matching* models, in the British institutional context search and matching provide a useful tool for explaining income outcomes after unemployment. Since EPL in the UK is weak and mismatches at the beginning of the employment career are part of an ongoing relocation process, the stigmatization of unemployed workers should be less pronounced than in labour markets with strict EPL. In contrast, human capital and especially signal models should already play an important role at the beginning of the employment career in Germany. First, because reliable educational signals prior to the first job in Germany guarantee a high amount of job matches between qualifications and job demand, the trial and error strategy for achieving an appropriate job is less common than in the UK. It implies that employers are more careful about hiring unemployed workers than in liberal countries. Secondly, since employment protection legislation (EPL) in Germany is strict, employers' hiring practices are risk-averse. Therefore, the EPL has consequences for the stigmatization of employees on the micro level (behavioural level of employers) and aggregates to low employer-initiated turn-over in the labour market on the macro level (Gangl, 2004). Thus,

the stigma attached to unemployment should be more pronounced in Germany than in countries with less strict EPL like the UK.

Taking into account these considerations, *we believe that voluntary job termination will improve post-unemployment earnings in the UK but not in Germany.* As with voluntary direct job mobility, voluntary indirect job mobility might be motivated by the wish to improve the current position, which should be visible in wage stagnation prior to unemployment. However, in contrast to direct job mobility, workers usually have no income information about their future jobs at the time of job termination. Thus, given the strong stigma of unemployment in Germany, voluntary job termination might be risky and *lead to a scar effect on post-unemployed wages.* Furthermore, we also believe that, in contrast to the UK, the *trigger event of unemployment is more than a transitory phenomenon and should have a long-lasting scar effect on subsequent earnings in Germany.*

3. Data and Methods

The analyses of this study are based on representative longitudinal data from the German Socio-economic Panel (SOEP) and from the British Household Panel Survey (BHPS) taken at each annual interview. The sample is selected as follows: observations of respondents with at least two subsequent interviews in the period from 1984 (for East Germany 1990) to 2006 and from 1991 to 2006 for the UK, employed at the time of interview, have been collected. We also yield the information if somebody was unemployed between two consecutive waves. The marginally employed (causal / seasonal workers) and self-employed are excluded from the sample. Since we want to investigate the effect of unemployment at the beginning of employment career we restricted the sample to the first 10 years after starting the first job. To measure the effect of job mobility, we use a within estimator (Wooldridge, 2002) to control for constant unobserved worker characteristics while avoiding unmeasured factors that may affect both job mobility and wages. For the i^{th} subject at the t^{th} measurement occasions, we use the following notation:

$$lnW_{it} = P_{it} + X_{it}\beta + T_{itm}Z_{itm}\sigma + \alpha_i + u_{it}$$

lnW is the natural logarithm of hourly wage at time (year) t for individual i; X_{it} is a matrix of variables influencing a worker's human capital and earning potential. The matrix Z_{itm} stands for different characteristics of direct or indirect job mobility (e.g. duration a person spent in the state m, how often this person was already in this state, etc.). u_{it} is the measurement of error term. P_{it} are the year dummies to control for period-specific factors. Finally, the term α_i is a time invariant individual specific error term of unobservable characteristics.

This term is a fixed individual effect and implies that there are time-constant differences between individuals. T_{it} is a matrix of dummy variables, indicating the kind of job mobility (m) at the year after the job change ($T+k$ with $k = 0, 1, 2, 3 \ldots 8-14$). Direct job mobility starts at the year of employer change (at measurement point $T+0$) and is followed for T+k (with $k = 1, 2, 3 \ldots 5-7, 8-10$ years). For example in the year of job change we constructed dummy variable T+0, for one year after job change a dummy T+1, for the second year after job change a dummy T+2 etc. Since wage information is only available if the person is employed at the time of the interview, the starting time for indirect job mobility is lagged by one year ($T+1$) after re-entering the labour market (for example T+3 means that a person is in the third year after she/he re-entered the labour market after a phase of unemployment). We control for actual job experience (+squared) and full and part time experience (+squared). We also control for other interruptions (education, maternity leave, inactivity). The following intervening variables, which are usually assumed to have an effect on wages, will be introduced as controls: age dummies, contractual weekly hours, permanent vs. fixed contracts, branch of industry (based on Singelmann, 1978 classification), occupational class, company size (four categories based on the number of employees), region (for Germany: South Germany, North Germany, and East Germany; for the UK: Middle, North, South England and Scotland). Note that these controls will be introduced *for all models* in the following tables. To deal with selection bias, we introduce the estimator proposed by Wooldridge (1995).

4. Results

Model 1 in Table 1 reports the results for direct and indirect job mobility after the controls described in our data and method section.

To start with *indirect job mobility*, upon the re-entry into the labour market after unemployment (at $T+1$) the income losses amounts to 6% in Germany (Model 1). When we follow individuals over the next eight years after unemployment interruption it becomes evident that the trigger event of unemployment has a long-lasting scar effect staying constant between 5–8%. *Direct job mobility* improves the subsequent wages by approximately 3–5% for the following seven years compared to the stayers.

In the UK workers changing their jobs indirectly gain about 14% compared to the stayers. These positive outcomes slightly decrease in the next five years but stay at a high level. Rewards of direct job mobility in the UK are also much higher than in Germany. Higher rewards for direct job mobility in the UK than in Germany are in line with our argumentation that the search and matching models are more appropriate to describe career patterns in the UK than in Germany.

In the following section we address the question of different aspects of unemployment characteristics on subsequent income development. First, we introduced an additional variable for recalled workers. Surprisingly, this variable provides additional explanation in neither Germany nor the UK (Model not shown). In Model 2 we introduced a variable "no change of industry". In Germany 32% of the workers change the branch of industry upon re-entering the labour market while in the UK almost 42% change the branch of industry. According to this model specification, the dummy variables for indirect job mobility ($T+k$) stand for *indirect job movers who re-start employment in the new branch of industry.* The scar effect of unemployment by changing the branch of industry amounts to 10% at $T+1$ and stays constant for the next eight years in Germany. The scar effect for those without changing branch of industry is about 5% smaller than for those changing the branch of industry.

In the UK the change of industry has no additional effect on subsequent income development. These results should be also interpreted against the background of institutional context. In a strongly skill- and occupation-based labour market such as Germany's the change of branch of industry implies devaluation of human capital while in the UK occupational and branch specific skills are less important than broad (academic) education.

Finally, we also introduced the duration of unemployment because we are interested whether gains in the UK and losses in Germany are a function of unemployment duration. To start with Germany, though unemployment duration has a negative effect on wages this effect hardly explains the income losses after unemployment spell (compare the coefficients for T+k between Model 2 and Model 3). These results imply that the scar effect of unemployment in Germany cannot be explained in terms of devaluation of specific human capital (job specific skills). We explain these losses in Germany in terms of stigma attached to unemployment. For the UK prolonged unemployment has a slightly negative impact on income.

Leaving a job voluntarily is dominated by those changing their job directly (35% in Germany and 50% in the UK), rather than by those coming from unemployment (12% in Germany and 20% in the UK). In Model 1 (Table 2) the results for voluntary job mobility are reported as T for direct job mobility and $T+1$ for indirect job mobility. Voluntary job change brings a 4% gain compared to the stayers in Germany and about 14% in the UK (Table 2). These results are in line with matching and searching models that predict higher wages for an on-the-job search (Burdett, 1978). Voluntary job mobility via unemployment in the UK is also rewarded by about 14%.

Table 1

Unstandardized Coefficients for the Effect of Direct and Indirect Job Mobility on Future Hourly Wage: Fixed Effect Models

	Germany			UK		
	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3
Indirect job Change						
T plus 1	-0.060***	-0.102***	-0.097***	0.145***	0.140***	0.164***
T plus 2	-0.054***	-0.094***	-0.090***	0.132***	0.128***	0.152***
T plus 3	-0.045**	-0.080***	-0.076***	0.113*	0.108*	0.132**
T plus 4	-0.072***	-0.101***	-0.099***	0.140*	0.135*	0.161**
T plus 5	-0.073*	-0.092***	-0.081**	0.086	0.082	0.100+
T plus 6–8	-0.081***	-0.114***	-0.114***			
Direct job Change						
Year job change	0.032***	0.036***	0.036***	0.124***	0.123***	0.126***
T plus 1	0.039***	0.044***	0.044***	0.141***	0.140***	0.142***
T plus 2	0.040***	0.045***	0.044***	0.130***	0.130***	0.132***
T plus 3	0.037***	0.042***	0.040***	0.153***	0.153***	0.154***
T plus 4	0.027*	0.032*	0.030*	0.098**	0.098**	0.097**
T plus 5	0.050***	0.053***	0.049***	0.085*	0.086*	0.085*
T plus 6–8	0.065**	0.065**	0.057*	0.156+	0.157*	0.153+
Unemployment characteristics						
No change of industry		0.053***	0.059***		0.023	0.031
Duration of unemployment			-0.006***			-0.004***
Duration of unemployment (squared)			0.000**			0.000+
Number of subjects	3027	3027	3027	996	996	996
Number of observations	18548	18548	18548	6067	6067	6067

Source: SOEP 1984–2006; BHPS 1991–2006.

Notes: Full set of control variables: actual job experience (+squared), full and part time experience (+squared), contractual weekly hours, permanent contract, branch of industry, region, occupational class, educational achievements (for UK), company size, age variable (dummies), term lambda and dummy variables for other employment interruptions (maternity leave, education, economic inactivity).

+ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Table 2

Effect of Job Termination on Hourly Wage upon Re-entering the Labour Market

	Germany	UK
	Model 1	Model 1
	b	b
Indirect job mobility (T+1)		
Voluntary	-0.057**	0.190***
Direct job mobility (T+0)		
Voluntary	0.040***	0.136***

Source: SOEP 1984–2006; BHPS 1991–2006.

Notes: Full set of control variables for all models: like in Table 1.
+ p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001.

5. Conclusion

In this article we investigated the outcomes of direct and indirect job mobility against the background of the institutional settings of the UK and Germany. This study contributes to research on job mobility in several aspects. While many studies have framed and tested theoretical models for liberal countries (Abbring et al., 1998; Kahn/Low, 1982; Boheim/Taylor, 2000) other studies have not differentiated systematically – or at all – between job beginners and older workers (Gangl, 2006; Arulampalam, 2001; Gregory/Jukes, 2001). In this study we take into account the institutional settings in the UK and Germany and restrict the employment career to the first 10 years.

Direct job mobility that is mainly initiated by voluntary job termination improves wages in the long run. However, direct job mobility is less common and the rewards are small in Germany compared to the UK. Higher rewards for the UK than in Germany are also in line with our argumentation that the 'job shopping' perspective is more appropriate to describe career patterns of a flexible labour market with less standardized educational/vocational degrees.

With respect to indirect job mobility the trigger event of unemployment penalizes the unemployed not only upon re-entry into the labour market, but it also has a long-lasting consequence on subsequent earnings in Germany. In the UK unemployment phase serves young people in finding a better job match and improving post-unemployment wages. Indirect job mobility has a scar effect on re-entering the labour market in Germany. While wage gains in the UK confirms search and matching models for the UK, high wage penalties for voluntary movers in Germany contradict the assumptions of the search and matching models that predict higher rewards for an active job search when unemployed (Kahn/Low, 1982).

Summarizing the results it becomes evident that the application of labour market theories should be applied with caution in different institutional contexts. While (voluntary) direct job mobility is in line with search and matching theories and provides positive outcomes in both countries, an unemployment spell in a rigid labour market has different implications than it does in liberal countries. Among other institutional settings, strong EPL and a tight linkage between individual education and job status create a strongly skill- and occupation-based labour market that guarantees high starting wages and good job perspectives for insiders in Germany. At the same time, in a rigid labour market with low turnover rates an unemployment spell aggregates to a negative signal. In contrast, in liberal countries weak EPL and weak linkage between vocational and occupational system make job beginners start their first jobs in inadequate positions with the prospect of working their way up to better and more qualified positions. Like on-the-job search unemployment phase is a part of normal ongoing job relocations and has positive outcomes on subsequent wages.

Against the background of these results, the question arises as to whether the mechanism behind direct and indirect job mobility described for Germany and the UK are unique for different educational groups. Further research should therefore take a closer look on the risk and chances of direct and indirect job mobility for different educational groups.

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