

Escaping the low pay trap: do labour market entrants stand a chance?

Dimitris Pavlopoulos* Didier Fouarge[†]

Tilburg University

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Abstract

In this paper, we investigate the wage and employment perspectives of low-wage labour market entrants, using panel data from the UK (BHPS), Germany (GSOEP) and the Netherlands (SEP). Cross-country comparison of these three countries that differ significantly with respect to their labour market characteristics, yields interesting empirical evidence. Rather than just investigating the probability of escaping low pay, we apply a discrete time hazard model for transitions from low pay to non low pay, to self-employment or to unemployment. The novelty here is that our model corrects for both observed and unobserved characteristics. We find negative duration dependence in the UK for exits to self-employment or non-employment, but not for exits to non low pay. In the Netherlands, we find negative duration dependence for exits to all states. We find, surprisingly, positive duration dependence in Germany. A closer examination of the data reveals that this is due to strong effects of apprenticeship, which is common among young German labour market entrants. In all three countries, low pay seems to be a temporary state for the high educated. Nevertheless, education is more relevant for exits from low pay in Germany and in the Netherlands than in the UK.

*Tilburg University, FSW S-173, Warandelaan 2, P.O. Box 90153, 5037AB Tilburg, the Netherlands tel. +31 (0)13 466 3001, email: D.Pavlopoulos@uvt.nl.

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1 Introduction

The entry into the labour market is one of the most important life events for most people. However, transition from education to work translates, sometimes, into the commencement of a low paid job. Occasionally, even highly qualified young people start their working career with such a job. The question that emerges is whether low pay at the commencement of the working career is a transitory experience or not. Thus, is it mainly "a first little step to success" or does it have a scarring effect on the whole working life of the individual? Human capital theory (Becker, 1975) argues that this is skill-dependent; highly educated youngsters will be sooner or later rewarded for their skills, while the low paid jobs will remain as a leftover for their lower qualified peers. This is more relevant the last 25 year that the demand for low skilled labour has considerable decreased (Acemoglu, 2003; Berman et al., 1998).

However, the entry to the labour market takes place under quite different circumstances in the various European countries. The vulnerability to unemployment, the level of their wages and the incidence of temporary or part-time work differs considerably across countries in Europe (Mansuy et al., 2001). de Grip and Wolbers (2003) suggest that the link between the vocational training system and the labour market has a key role in determining the perspectives of the low skilled labour market entrants. His argument is based on the division between Internal and Occupational Labour Markets introduced by Doeringer and Piore (1971) and pursued by several researches such as Marsden (1990). In Occupational Labour Markets, there is a strong specification of job tasks tasks and therefore vocational training qualifications are always a recruitment requirement for job seekers. Moreover, climbing the job hierarchy ladder depends on the acquisition of further educational or vocational qualifications. Thus, it is difficult for the low skilled both to find a job and (if they do) to get a promotion in order to increase their wage. In contrast, in Internal Labour Markets, firm specific skills are more important and "on the job training" is common for both low and high skilled workers. Therefore, in countries where Internal Labour Markets dominate, and especially during an economic upturn such as the mid and late 1990's, employers will hire more low skilled youngsters and offer them "on the job training". Moreover, since in Internal Labour Markets the wage of employees depends more on firm-specific human capital, low wage job starters will have more chances to escape low pay than in Occupational Labour Markets.

The aim of this paper is to investigate the wage and employment perspectives of low paid labour market entrants in an international perspective. Three European countries with very different labour markets characteristics are included in our analysis: the UK, Germany and the Netherlands. According to the classification of Gangl (2001) the UK is characterized as an Internal Labour Market country, while the Netherlands and Germany as Occupational Labour Market countries. However, as we will argue further on, the institutional settings of Germany and the Netherlands present important differences, which can account for considerable variation in low pay patterns (Lucifora, 2001).

Our data come from national panel datasets of the three countries (BHPS, GSOEP and SEP) and cover a period from 1990 until 2001. This period covers almost a full business cycle as the economy of the three countries of our sample was in a recession until 1992 (1993 for the Netherlands), it entered in a period of growth later in the 1990s and finally the first signs of a new slump became visible in the beginning of the twentieth century. During the 1990s, low skilled employment became more frequent in the Netherlands and in the UK, but remained stable in Germany. Moreover, the incidence of low pay became more frequent in all three countries (de Grip & Nekkers, 2001). Building up on recent studies that investigated the incidence and the persistence of low pay in several European countries, we analyze the exits out of the low pay not only to “high” pay but also to self employment and unemployment controlling for the duration of the low pay spell. Therefore, we employ a discrete time hazard model with five competing risks. The novelty in this paper is that we control for observed as well as for unobserved heterogeneity in the competing risks framework.

The rest of the paper is organized as follows. Section 2 presents the findings of the relevant literature and elaborates on the hypotheses of our analysis. The data used in our analysis are discussed in Section 3. Section 4 presents the duration model estimated and discusses the results from the estimations. Some conclusions are drawn in Section 5.

2 Expectations

2.1 Labour market institutions and low pay duration

Beyond any doubt, the last 25 years have not been the best period for the low paid employees. Evidence suggest that in the US, the college premium increased by 25% between 1979 and 1995 (Berman et al., 1998), while the real wages of the low paid and low educated decreased. Similar findings exist for the UK. In continental Europe, on the other hand, unemployment increased sharply in the 1990’s driving many low paid employees into persistent joblessness. Leading theories for the explanation of these changes in the wage structure are those of increased international trade (Borjas & Ramey, 1995), rapid skill-biased technological change (Acemoglu, 2003; Krueger, 1993; Caselli, 1999) and abolition of labour market institutions. The latter cause is contended to account for differences between the liberal labour markets of the US and the UK and the regulated markets of continental Europe (Freeman & Katz, 1995; Blau & Kahn, 1996). In the US and the UK, where unionization rates were low, the nominal values of minimum wages remained stagnant in the 1980s¹ and the hiring/firing and temporary contracts legislation was flexible, wages were allowed to decrease and the labour market could clear. In continental Europe, the bottom of the wage distribution was highly affected by the existence of high minimum

¹In the UK the strength of Wage Councils - institutions responsible for the regulation of wages - diminished in the 1980’s and Wage Councils were finally abolished - with the exception of the agricultural sector - in 1993. A national minimum wage was introduced in 1999.

wages and binding collective agreements. Sharp unemployment increases was the price the low paid had to pay for enjoying high levels of wage protection when employed.

On the basis of the aforementioned arguments, it could be suggested that the wage perspectives of labour market entrants are determined by the degree of the liberalization of the labour market. In a liberal labour market such as in the UK - where the relationship between skills and their market value is strong - exits from low pay are expected to depend on the level of human capital accumulated by an individual. Thus, the British high skilled are expected to escape quickly from low pay. In support for this, de Grip and Nekkers (2001) suggest that in the 1990s the skill-premium increased substantially in the UK, but presented a diverse pattern in Germany and in the Netherlands. Duration of low pay is expected to be less related to education in Germany where the skill premium is fixed by collective bargaining and labour market entrants face flatter wage careers. However, transitions to unemployment are more frequent but within employment, transitions out of the low pay are less common. For the Netherlands, findings are expected to lie somewhere in between. Furthermore, in the UK, because of the low level of protection, the transition rate from low pay to unemployment is expected to be lower than in Germany and the Netherlands that both offer higher levels of protection. Moreover, because in a liberal labour market people are more likely to rely on themselves for improving their economic position than on institutions, transitions from low pay to self-employment are expected to be more frequent in the UK.

To conclude the above discussion, we derive the following sets of expectations:

Expectations 1: Low pay is more common in the UK. Duration of low pay is higher in Germany and in the Netherlands than it is in the UK. In the UK exits from low pay are strongly related to education and training.

Expectations 2: The transition rate from low pay to unemployment is expected to be lower in the UK than in Germany and the Netherlands and the transition rate to self-employment is expected to be larger.

2.2 Mitigating effect of other institutional aspects

However, there is not much support from the literature to the first set of expectations. There is evidence concerning the persistence of low pay in the UK, especially among female employees (Stewart & Swaffield, 1999). Stewart and Swaffield also find that training, plant size and union coverage increase the probability of exiting low pay. Persistence of low pay employment and increased persistence since the 1970s is also found by Dickens (2000), with the use of both panel and administrative data for the UK. The studies carried out by Cappellari (2000, 2002) and Buchinsky et al. (1998) point towards similar results for Italy and France, respectively. Cappellari (2000) also finds that job characteristics rather than personal attributes are more relevant for escaping low pay. Burkhauser et al. (1997) find no significant difference in the incidence and persistence of low pay between the US (for

which one can have similar expectations as the UK) and Germany.

Looking in more detail into the characteristics of the three countries included in our analysis, with respect both to their labour market and their educational system, leads to the derivation of set of hypothesis that conflicts with the aforementioned. In Germany, long term cooperative relationships is the main feature of the labour market. Many young people go through a period of training or apprenticeship for a period up to three years. Approximately half of the apprenticeships end by being transformed into regular jobs as this form of employment is the main screening device of employers for recruitments (CPB, 1997). Furthermore, the labour market is strongly regulated by collective bargaining which covers more than 80% of German employees. The German educational system is highly oriented towards the labour market. Educational certificates and vocational training are closely linked to employment. Therefore, the German employment system is a typical insiders' labour market (Blossfeld, 2001; Kim & Kurz, 2001). In the view of increased unemployment, labour market entrants are more likely to find a low pay job (out of the insiders' labour market) and to remain in a low pay status for long. The duration and the exits from the low pay status are strongly dependent on education and especially training. This is in accordance with Gangl (2001), who suggests that Germany is dominated by Occupational Labour Markets.

On the contrary, in the UK market forces rather than statutory regulations are dominant in the labour market. Thus, short-term employment relations are more frequent. Collective bargaining effects and unionization rates are low. Hence, the employment system of the UK is much more open than the German and low pay is spread among all categories of employees and not just among labour market entrants. Compared to the German system, the UK educational system is more flexible and weakly stratified. There are also more possibilities to move across university education and vocational training than in Germany (Kim & Kurz, 2001; Müller & Shavit, 1998). Therefore, the relationship between education and labour market outcomes is expected to be weaker in the UK than in Germany. Again, this is in line with Gangl (2001) that classifies the UK to the Internal Labor Market countries.

The Dutch labour market combines some institutional arrangements that are dominant in Germany, with extensive flexibility in employment in terms of temporary contracts and flexible working hours. Although the overall setting of the educational system resembles the German one, the link between education and employment is looser than in Germany. This is mainly due to the difference in the apprenticeship and vocational training system. Apprenticeship is less common in the Netherlands than in Germany. Moreover, apprenticeship is spread across all age groups in the Netherlands (CPB, 1997), while in Germany it is observed predominantly among young labour market entrants.

This leads us to the following set of alternative expectations, which is in contradiction with our first set of expectations:

Expectations 3: Low pay is more prevalent in Germany, less common in the UK and even less frequent in the Netherlands. Exits from low pay are determined by education and

training much more in Germany and in the Netherlands than in the UK.

In this paper, we test these three sets of expectations.

3 Data and main concepts

The study uses data for the 1990s from the three national panel datasets. For the UK, we use the British Household Panel Survey (BHPS) that contains information on income and labour market participation approximately 10.000 individuals aged 16 or more per year. The BHPS waves 1-10, corresponding to the years 1991-2001, are used. For Germany, we make use of the German Socio-Economic Panel (GSOEP), which covers about 13.000 individuals aged 16 or more. Waves 7 up to 17, corresponding to years 1990-2001, are used. For the first two waves (1990, 1991) only information for West Germans is used. For the Netherlands, our data come from the Socio-economic Panel (SEP), which covers 10.000 individuals aged 16 or more. We make use of the last 10 waves (1991-2001) of the panel. The information from the three datasets is highly comparable.

The sample is restricted to low paid male job entrants between 18 and 45 years old. Specifically, we select males declaring paid employment as their main activity that commenced employment in the period of reference. As our focus is on labour market entrants, we only select males that had not been in paid employment before, except for casual or seasonal work. Therefore, most of them are school leavers. The low-pay threshold is set to the two thirds of the median yearly wage income. Female employees are excluded as the proportion of them working part-time differs largely across the three countries. Including females while defining low wage on the basis of yearly wage would lead to a over-representation of them among the low paid in countries with a large share of part-timers such as the Netherlands. A brief description of the sample used for estimation is provided in the appendix.

Our main economic variable is the yearly income from paid employment. We use yearly amounts as the datasets do not provide reliable information about hourly or monthly wages. For the UK and Germany the net amounts are used, while for the Netherlands only the gross wage incomes are available. The net amounts correspond to the total personal net labor income after deduction of taxes and social contributions. From the SEP and the GSOEP only retrospective wage information is available. Henceforth, information for wave t is derived from wave $t + 1$.

Alongside with time, three types of variables are included in the analyses: demographic, human capital and job related characteristics. Demographic variables include age, race or nationality and the family status of the individual. The highest level of completed general education and the occurrence of recent training are the human capital variables. Job related variables include information about the sector of employment, the size of the firm, the position in the workplace, the usual number of working hours per week, the type of employment contract and the existence of a trade union at the workplace.

4 The model

Our aim is to model the hazard rate for transitions out of low pay for labour market entrants. However, transitions out of low pay cannot be considered to be restricted to transitions within paid employment (e.g. from low to ‘high’ pay). Low paid employees can become unemployed, can start their own business or can move to another non-employment status such as inactivity. Therefore, we consider low pay duration in a competing risks framework with five destination states: low-pay, non-low pay (i.e. “high” pay), self-employment, unemployment and other transitions out of employment. Since our data come from yearly observations we apply a discrete time choice model for these five competing risks. After organizing our data in a person-period file², we estimate this model with the use of a multinomial logit regression. Let P_{0m} be the probability for an individual i of escaping low pay status (0, remaining in low pay is the comparison group) to a status m after surviving t time points. Let X_{it} denote a vector of covariates for an individual i at a time point s (s , the calendar time, is one of these covariates). Covariates can be either time constant or time varying. The transition probability is specified by the following multinomial logit model:

$$P_{0m}(x_{it}, t) = \frac{\exp(b_0^m + b_1^m \ln t + b_2^m X_{it})}{1 + \sum_{m'=1}^4 \exp(b_0^{m'} + b_1^{m'} \ln t + b_2^{m'} X_{it})} \quad (1)$$

where b_0, b_1, b_2 are vectors of coefficients to be estimated. Therefore, the likelihood contribution of an individual for whom no event has taken place until $T_i - 1$ is:

$$L_i = \left[\prod_{t=1}^{T_i-1} P_{00}(x_{it}, t) \right] \left[P_{00}(x_{iT_i}, T_i) \right]^{1 - \sum_{m=1}^4 \delta_{tim}} \left[\prod_{m=1}^4 P_{0m}(x_{iT_i}, T_i) \right]^{\delta_{tim}} \quad (2)$$

$$\text{where } \delta_{tim} = \begin{cases} 1 & \text{if } d_{ti} = m \\ 0 & \text{if } d_{ti} = 0 \end{cases}$$

So far we have assumed that transitions of individuals depend only on observed characteristics and time. However, this might not be the case as unobserved characteristics (ambition, effort) can be relevant. Failing to account for such unobservables would bias the results. Hazard rate models that do not account for unobserved heterogeneity run the risk of overestimating negative duration time dependence (or underestimating positive duration dependence) and underestimating the effect of time - varying covariates (Lancaster, 1990; Vermunt, 1997). The novelty of our approach compared to previous research is that we control for unobserved heterogeneity in the competing risks model. In order to control for

²In this form, the number of cases per individual equals the number of years he appears in the survey.

unobserved heterogeneity we assume that the unobserved individual effect ϵ_i is time constant and independent of the observed covariates but its effects varies per destination state d . We further assume that the unobserved individual effect ϵ_i follows the standard normal distribution ($\epsilon_i \sim N(0, 1)$)³. The transition probability for an individual i of moving to a status m after surviving t time points, conditional on observed covariates and unobserved characteristics is given by:

$$P_{0m}(x_{it}, t, \epsilon_i) = \frac{\exp(b_0^m + b_1^m \ln t + b_2^m X_{it} + \lambda^m \epsilon_i)}{1 + \sum_{m'=1}^4 \exp(b_0^{m'} \ln t + b_1^{m'} \ln t + b_2^{m'} X_{it} + \lambda^{m'} \epsilon_i)} \quad (3)$$

Hence, the individual's likelihood contribution is:

$$L'_i = \int_{-\infty}^{\infty} L_i f(\epsilon_i) d\epsilon_i \quad (4)$$

The results of the model are sensitive to the choice of the functional distribution of the unobserved effect. This choice, however, cannot be fully justified. Therefore, we adopt a non-parametric approach introduced by Heckman and Singer (1984) and pursued also in the sociological literature as a latent class model (Vermunt, 1997). According to this approach, the transitions to different states vary between a certain number of classes in the sample. This methodology is applied by allowing the intercept b_0^m to vary across the L classes⁴. In this case the transitional probability for an individual i that belongs to a class ℓ is given by:

$$P_{0m}(x_{it}, t, \ell) = \frac{\exp(b_{0\ell}^m + b_1^m \ln t + b_2^m X_{it})}{1 + \sum_{m'=1}^4 \exp(b_{0\ell}^{m'} + b_1^{m'} \ln t + b_2^{m'} X_{it})} \quad (5)$$

The likelihood contribution of an individual belonging to class ℓ is:

$$L''_i = \sum_{\ell=1}^L \left[\prod_{t=1}^{T_i} L_i \right] \pi_\ell \quad (6)$$

where π_ℓ is the probability of belonging to class ℓ .

³Usually it is suggested to assume a Gamma distribution (Meyer, 1990) for the unobserved term. However, there is no software available that allows for such a distributional assumption. Note that with the notation used here, $\lambda^{m'}$ corresponds to the standard deviation of the random effects in standard panel regressions models.

⁴The choice of the number of classes is rather arbitrary. We use the model fit measures to select the optimal number.

5 Results

5.1 Descriptive analysis

[Insert Figure 1 about here]

Figure 1 depicts the evolution of the fraction of the low paid among all employees over time. Low pay is more common in the UK, where the relevant fraction varies between 23% and 25.5%, which confirms our first expectation. In the Netherlands, rates are much lower but increasing during the 1990s (7% - 14%). In Germany, the relevant percentage lies somewhere in the middle of the UK and the Netherlands in most years. Between 1994 and 1999, it fluctuates between 15% and 16%⁵. Percentages in all countries seem to be converging after 1995.

[Insert Table 1 about here]

German low paid labour market entrants are mostly low skilled workers, as 44.8% of them has not finished high school, while only 4.9% of them has a higher education degree. On the contrary, in the UK, our target group is more equally distributed among the various educational levels, confirming the first hypothesis. The fraction of highly qualified low paid job starters (29.6%) is slightly higher than the relevant percentage of employees with low or no educational qualifications (23%). In the Netherlands, the distribution of the low pay labour market entrant across the educational levels lies in between the ones of the UK and Germany: 34.2% of them has not finished high school, while 13% of them has a university degree.

As expected, a large part (61.2%) of German low paid job starters are apprentices. 55.6% is between 18 and 24 years old and 17.3% between 25 and 29. 74.1% is single and 82.6% has a German nationality. Focusing at the job characteristics, 32.4% of our target group is employed in small size businesses (less than 20 employees), 31.5% in medium sized (20 up to 200 employees) and 36.1% in large enterprises (more than 200 employees). Employees working with a temporary contract (that for the majority of the cases are apprentices) are over-represented in our sample, as they consist 60.2% of it. Part-timers are 9% of our sample. Only a very small percentage of low wage job starters (2.7%) has a second job, while 13.7% of our job starters remain in low paid although they experienced a job change the year prior to the survey.

The British low paid job entrants are slightly older than their German counterparts as 50.6% of them is between 18 and 24 years and 19.7% is from 25 to 29. 60.1% of them is neither married nor cohabiting and 56.8% has no children. Almost all low paid job entrants

⁵In the first years of our sample period data only from West Germany were available, which can partly explain the different percentages for 1990-1993. For 2001 data on low pay come from gross instead of net income

(96.2%) are white. The majority (47.1%) works in commercial services, a large fraction (29.9%) in the industry and minor parts in the primary and in the non-commercial sector including public enterprises (6% and 17% respectively). Temporary employment among British low paid job entrants is rather rare compared to the German (14%). 23.4% of them works in small businesses (less than 10 employees), 43.6% in medium sized (10 to 100 employees) and 33% in large enterprises (more than 100 employees). Part-timers are 7.6% of our sample. 11.9% is in a low paid status although it has a second job and for 34.1% there is a trade union at its workplace.

In the Netherlands, low paid job entrants are much older than their British and German peers. Only 13% of them is younger than 25 while 28.2% is between 25 and 29. 44.7% of them is single and 44.3% has no children. The majority (35.1%) of our target group works in the industry sector, large parts are employed in the commercial and the non-commercial sector (34.3% and 26.7% respectively) and a very small part in the primary sector (3.9%). 77.8% of them has a blue-collar job, 16.4% works part-time and 14.4% is employed with a temporary contract.

5.2 Non-parametric results

A straightforward way to investigate cross-country differences in exits from low pay is to investigate turnover tables. Table 2 presents the transition rates from low pay to the five competing states we distinguish. The data in the table seem to partly support our first set of expectations: there are more transitions out of low pay in the UK than in Germany. However, the transition rate out of low pay in the Netherlands is even larger. This, however, is probably the result of increased shortages in Dutch labour market in the period under scrutiny. These shortages resulted in a substantial increase in labour market participation, a sharp decrease in unemployment and wage increases, which improved the labour market opportunities of the low paid.

[Insert Table 2 about here]

The transition rate to self-employment is larger in the UK, which is in line with our second set of expectations. Transitions to unemployment are however much lower in the Netherlands. This, again is possibly due to the “Dutch employment miracle” that took place in the period of reference. However, transition tables are not informative about the duration of low pay. The survival functions provides us this information. Figure 2 plots the cumulative staying probability after t years of low-pay employment for all three countries. Exits from low pay appears to be much more difficult in Germany than the UK and the Netherlands, for which the survival functions are almost identical. This is in accordance with our third expectation (and with the data in Table 1), which suggests that the employment system in Germany is closed and low paid labour market entrants are trapped in low pay jobs.

[Insert Figure 2 about here]

Plotting the survival functions per educational status reveals even more differences between countries. Figure 3a shows that, contrary to expectation 1 where a market-like reward to education was expected, education does not affect survival in low pay in the UK. Highly educated low pay workers find it more difficult to escape their status than their less qualified counterparts. In Germany (Figure 3b), having a higher education degree seems to ensure a fast transition out of low pay. Survival curves for the low and average educated low paid starters are initially close. However, after experiencing three years in low pay the survival rate for the low qualified decreases steeply. This is probably due to the fact that most of the low qualified low paid job starters are in apprentices (61.2%), which are usually employed in low pay jobs that last up to three years. This is investigated in more detail below.

The survival curves for the Netherlands (Figure 3c) are similar to Germany with the exception of the drop of the survival rates of the low qualified after 3 years. In the Netherlands, the high educated low pay labour market entrants have the lowest probability to remain in a low pay job, while the lowest educated have the highest probability to remain.

[Insert Figures 3a-3c about here]

5.3 Results from the competing risks model

Tables 3a-d present the estimates for the coefficients from the competing risks model, where remaining in low pay is treated as the reference category. Therefore, estimates for exits into non-low pay, self employment, unemployment and other non-employment status are being discussed. Based on the shape of the survival curves, we use the Weibul specification for duration dependence⁶. Calendar time is modelled as a linear time trend. Two models have been estimated, one controlling for observables only and one controlling for observed and unobserved heterogeneity.

5.3.1 United Kingdom

[Insert Table 3a about here]

Starting with demographic characteristics, being single has a negative effect on the probability of a transition to non-low pay. As for the different age groups, job entrants between 30 and 34 and entrants over 40 are more likely to move to non-low pay than young entrants (18 to 23 years old). Low pay entrants between 30 and 34 are also likely to move to non-employment (but not unemployment) and job starters between 35 and 39 are

⁶We also tried a non-parametric specification of duration produced, which produced similar results.

more likely to move to self employment. The competing risks analysis yields some different results than the non parametric one, with respect to human capital variables. The higher educated low wage job entrants have a higher probability of escaping their status than their non-qualified colleagues. For the rest, neither education level nor recent training has any significant effect.

Just like Cappellari (2000), we find that job characteristics are important determinants of the transition out of low pay. And in fact, overall, job characteristics seem to play a larger role in explaining transitions in the UK than in Germany and the Netherlands. From the job related characteristics, working in the primary sector increases the probability of a transition to non low pay but decreases the probability to move to an other (but unemployment) form of non-employment, compared to being employed in the commercial services sector. Being employed with a temporary contract increases the probability for a transition to unemployment or to another form of non-employment. As expected, the more hours an employee works the more possible (slightly) it is to move to non-low pay employment. Moreover, the probability of a transition to non-low pay increases with the size of the firm. Unexpectedly, employees holding a second job will most likely remain in low pay. As for the the effect of job history related covariates, we find that the existence of an unemployment spell before the first job increases the chances for a job to unemployment transition. Unlike Stewart and Swaffield (1999), we find no significant effect of union coverage on the exit probability from low pay. We do find the expected negative effect on the transition probability to unemployment, but this effect is no more significant after we have corrected for unobserved characteristics.

The small effects of business cycle indicate that in the late 1990's it has become slightly more easy to move to non-low pay or non-employment.

Finally, in the model without correction for unobserved heterogeneity, duration dependence is weak in the case of transitions to non-low pay but strong for transitions to the other states. Correcting for unobserved characteristics, however, changes the sign of duration dependence for transitions to non-low pay, while leaving the coefficient insignificant. It diminishes the size of the effect for transitions to self-employment and diminishes the significance for transitions to unemployment and non-employment. Controlling for unobservables also results in a larger effect of the highest educational level for transition to non-low pay.

5.3.2 The Netherlands

[Insert Table 3b about here]

Among the personal attributes, age seems to have the strongest effect on the transition probabilities of low pay labour market entrants in the Netherlands (Table 3b). Estimates suggest that low pay job entrants older than 29 are more likely to move to non-low pay than their younger (19 to 24) peers. Job starters between 24 and 29 are less likely to end up in a

non-employment situation (but not unemployment). Married labour market entrants and heads of household are less likely to withdraw from labour market participation, possibly because of the financial responsibility. On the contrary entrants having children are more likely to move to non-employment.

Confirming our bivariate findings, human capital variables in the Netherlands have clearly a stronger effect than in the UK. Having a secondary education qualification and especially having a university degree increases the probability of a transition to non-low pay. University graduates are also more likely to move to self-employment and non-employment (except unemployment). This confirms our third set of expectations.

As for the job related characteristics, the working hours have a small but significant effect. Employees working more hours are not only slightly more likely to move out of low pay (to non-low pay) but they have more chances to move to self employment. Working with a temporary contract increases the probability for a transition to both unemployment and non-employment, which is verifies the fact that Dutch employers use temporary contracts as a screening process for their employees (Bolhuis, 1996). Compared to the early 1990s, at the end of the decade a transition to unemployment became less likely, which is consistent with the aforementioned developments on the Dutch labour market.

Finally, there is clearly a significant negative duration dependence for leaving low pay. Individuals starting their job career with a low paid job are less likely to move to non-low pay or to non-employment (except for unemployment) than retaining their status. Correcting for unobserved characteristics reduces the duration dependence for transition to non-low pay. Part of the duration dependence can thus be explained by unmeasured background characteristics.

5.3.3 Germany

[Insert Tables 3c, 3d about here]

From the demographic characteristics, not being a head of household reduces the probability for a transition to non-low pay and to self-employment (table 3d). This is because there is no financial responsibility for other household members in that case. Being a non-German increases the probability of moving to non-low pay, which is rather surprising. However, it can be explained by the fact that a large part of non Germans are citizens of other “old” EU member states.

Human capital characteristics have, as in the Netherlands, a significant effect. Thus, individuals with a high school degree and especially with higher education qualification are more likely to move to non-low pay than lower qualified employees. This is in line with our third set of expectations. The effect of training is rather small as it only decreases the probability for a low pay to self-employment transition.

Among job related covariates, being employed full time and changing a job (in accordance with the findings of de Grip and Nekkers (2001)) increase the probability of a

transition to non-low pay, while working with a temporary contract decreases the probability of a job to unemployment transition. Working for a large firm both increases the probability of moving to non low pay and decreases the probability of moving to self-employment. As in the UK, having experienced an unemployment spell before getting the first job increases the probability of a job to unemployment transition. This is probably due to the scarring effect of past unemployment.

Focusing on duration effects we came across a rather striking result. Contrary to the UK and the Netherlands duration dependence is positive and significant (table 3c). This means that the longer a job starter remains in low pay the more likely he is to escape it. This is in accordance with the results of the descriptive analysis that showed the survival curves to have a very high initial level and to decrease steeply afterwards. However, what hasn't been fully taken into account in Table 3c is that a larger fraction of German low wage labour market entrants are in apprenticeship, which is de facto a form of low paid employment. Apprenticeship, however, is a short-term situation meant to build up additional qualifications and from which one is likely to experience upward wage mobility CPB (1997). In order to estimate the true duration dependence net from apprenticeship effects, the interaction effects between duration and apprenticeship is included. Table 3d shows negative duration dependence to unemployment and positive but insignificant duration dependence to the other states for entrants who are not in apprenticeship. It also shows that for an apprentice the longer the duration the more likely to move to non-low pay, to unemployment or to non-employment. Correction for unobserved heterogeneity increases the size of the effect of duration but does not change the significance.

6 Conclusions

In this paper, we have made a cross-country comparison of low-wage duration among low pay labour market entrants (workers in their first job) in the UK, Germany and the Netherlands. These three countries are quite different with respect to their labour market characteristics. The UK can be characterized as an Internal Labour Market country while Germany and the Netherlands as Occupational Labour Market countries. However, Germany has a highly regulated labour market, while The Dutch labour market combines protective regulations with high flexibility. We applied a discrete time hazard model for transitions from low pay to high pay, to self-employment or to unemployment, while controlling for low pay duration. While most analyses account only for observed characteristics in the competing risks framework, we controlled for both observed and unobserved heterogeneity.

Summarizing our findings, we find negative duration dependence in the UK for exits to self-employment or non-employment, but no duration dependence for exits to non low pay. In the Netherlands, we find negative duration dependence for all exits states. However, it is only significant for transitions to non low pay and non employment. Surprisingly, we find positive duration dependence in Germany, but this is due to young people engaged

in the German apprenticeship system: they tend to remain in low pay jobs during their apprenticeship but to exit quickly to non low pay jobs at the end of it. For other entrants, we find no evidence of duration dependence. For Germany and for the UK, transitions from low pay to unemployment are found to be more likely for employees that experienced an unemployment spell prior to their first job.

Low pay is to be a temporary state for the high educated in all three countries. On the one hand, we expected (expectation 1) the returns to education in terms of low pay exits to be large in the UK than in the two other countries: the UK labour market, because of its more liberal-oriented character, tends to reward skills to their market value. On the other hand, we expected (expectation 3) these returns to education to be larger in Germany because the educational system is more stratified and more oriented towards the labour market. Our analysis shows that none of the two expectations is completely verified, but our results are closer to the third expectation than to first one: low pay exits are more strongly determined by education in Germany, but also in the Netherlands, than in the UK.

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Table 1: Composition of the sample

	UK	Germany	Netherlands
Lower than High school	23.0%	44.8%	34.2%
Higher education	29.6%	4.9%	13.0%
18-24	50.6%	55.6%	13.0%
25-29	19.7%	17.3%	28.2%
part-time	7.6%	9.0%	16.4%
temporary	14.0%	60.2%	14.4%
apprentices		61.2%	

Table 2: Overall transitions

	UK	Germany	Netherlands
low pay	55.3%	67.1%	46.8%
non-low pay	30.2%	14.5%	41.6%
self employment	3.4%	1.1%	2.9%
unemployment	6.6%	9.3%	1.7%
other	4.6%	8.0%	7.0%
Total	100%	100%	100%
Transitions	2196	2074	1089

Table 3a: Estimation results of the competing risks model, United Kingdom

	non-low pay		self-employment		unemployed		other	
	no control for uh	controlling for uh	no control for uh	controlling for uh	no control for uh	controlling for uh	no control for uh	controlling for uh
Log Duration	-0.034 (0.104)	0.212 (0.153)	-1.079*** (0.333)	-0.828** (0.361)	-0.589*** (0.202)	-0.379 (0.236)	-0.557** (0.260)	-0.565* (0.305)
Calendar time	0.085*** (0.025)	0.085*** (0.027)	0.016 (0.058)	0.005 (0.060)	-0.026 (0.041)	-0.034 (0.042)	0.166*** (0.054)	0.176*** (0.069)
Race (white)	-0.304 (0.451)	-0.438 (0.492)	1.033* (0.625)	1.149* (0.648)	0.333 (0.584)	0.310 (0.601)	2.067*** (0.549)	2.605*** (0.732)
Age 25-29 (19-24)	0.328** (0.154)	0.380** (0.167)	0.138 (0.432)	0.174 (0.435)	0.336 (0.263)	0.366 (0.270)	-0.324 (0.384)	-0.742 (0.502)
30-34	0.315 (0.204)	0.579** (0.246)	0.802* (0.456)	1.104** (0.476)	0.013 (0.361)	0.235 (0.389)	0.387 (0.448)	0.150 (0.564)
35-39	0.263 (0.245)	0.498* (0.285)	0.775 (0.522)	0.730 (0.550)	0.203 (0.409)	0.256 (0.433)	-0.486 (0.674)	-0.842 (0.806)
older than 40	0.655*** (0.231)	1.025*** (0.282)	0.503 (0.552)	0.707 (0.582)	-0.089 (0.422)	0.160 (0.449)	-1.014 (0.806)	-1.945** (0.983)
marital status (married)	-0.564*** (0.155)	-0.713*** (0.185)	-0.428 (0.380)	-0.549 (0.395)	-0.146 (0.266)	-0.271 (0.281)	0.820** (0.386)	1.256*** (0.522)
Has kids (no)	-0.290*** (0.123)	-0.276** (0.133)	0.292 (0.297)	0.319 (0.304)	-0.145 (0.208)	-0.119 (0.214)	-0.237 (0.264)	-0.262 (0.321)
Head of household (no)	0.036 (0.159)	-0.022 (0.178)	-0.253 (0.366)	-0.371 (0.378)	-0.064 (0.268)	-0.106 (0.281)	0.873** (0.371)	0.959** (0.462)
lower education (no education)	0.246 (0.258)	0.298 (0.295)	-0.331 (0.627)	-0.243 (0.646)	-0.126 (0.348)	-0.075 (0.371)	-0.393 (0.743)	-0.764 (0.938)
high school education	0.542*** (0.198)	0.509** (0.229)	-0.001 (0.420)	0.044 (0.434)	-0.679*** (0.282)	-0.681** (0.298)	0.634 (0.508)	0.552 (0.612)
higher education	1.104*** (0.206)	1.173*** (0.239)	0.551 (0.428)	0.630 (0.442)	-0.331 (0.300)	-0.292 (0.317)	0.393 (0.531)	0.191 (0.650)
Contract (permanent)	-0.187 (0.179)	-0.202 (0.192)	0.078 (0.379)	0.112 (0.388)	0.539** (0.254)	0.506* (0.262)	0.950*** (0.295)	1.077*** (0.366)
Industry (comm. services)	0.216* (0.134)	0.246* (0.148)	-0.181 (0.384)	-0.165 (0.390)	0.255 (0.233)	0.273 (0.241)	-0.656* (0.399)	-1.065** (0.540)
Primary sector	-0.054 (0.247)	-0.080 (0.270)	0.623 (0.501)	0.558 (0.513)	0.294 (0.386)	0.244 (0.399)	0.550 (0.503)	0.774 (0.602)
Non comm. services (private)	-0.579** (0.277)	-0.600** (0.295)	0.810* (0.448)	0.727 (0.461)	0.374 (0.374)	0.310 (0.388)	0.959** (0.433)	1.356** (0.535)
Non comm. services (public)	-0.019 (0.215)	-0.038 (0.244)	-0.726 (0.615)	-0.827 (0.632)	-0.322 (0.450)	-0.367 (0.462)	0.622* (0.384)	0.839* (0.486)
firm size (< 10 employees)	0.169*** (0.042)	0.160*** (0.045)	-0.233*** (0.116)	-0.229** (0.119)	-0.032 (0.075)	-0.034 (0.076)	0.027 (0.089)	0.062 (0.111)
hours of work	0.042*** (0.006)	0.044*** (0.007)	-0.006 (0.013)	-0.004 (0.014)	0.003 (0.010)	0.004 (0.011)	-0.022* (0.012)	-0.025* (0.015)
Second job (no)	-0.489*** (0.175)	-0.459*** (0.188)	0.177 (0.351)	0.179 (0.362)	-0.449 (0.315)	-0.460 (0.321)	-0.081 (0.343)	-0.182 (0.418)
Trade union at workplace (yes)	0.006 (0.140)	0.079 (0.156)	0.206 (0.361)	0.453 (0.369)	-0.555** (0.274)	-0.460 (0.284)	-0.267 (0.308)	-0.376 (0.394)
Unempl. before first job (no)	-0.011 (0.146)	0.136 (0.194)	0.113 (0.351)	0.301 (0.373)	0.426* (0.226)	0.533** (0.255)	-0.941** (0.451)	-1.350** (0.581)
Class 1	-1.720** (0.754)	-1.542* (0.837)	-3.761*** (1.538)	-3.75*** (1.575)	-1.873* (1.177)	-1.922 (1.219)	-7.629*** (1.478)	-9.446*** (1.986)
Class 2		-4.106*** (1.158)		-9.25*** (8.067)		-5.671 (5.534)		-6.607*** (1.845)
Transitions	559	559	60	60	130	130	80	80
Observations	1,866							
Log likelihood	-2,229.44							
R ²	0.0862							

Robust standard errors in brackets

Reference category in brackets

* significant at 10%; ** significant at 5%; *** significant at 1%

Table 3b: Estimation results of the competing risks model, Netherlands

	non-low pay		self-employment		unemployed		other	
	no control for uh	controlling for uh	no control for uh	controlling for uh	no control for uh	controlling for uh	no control for uh	controlling for uh
Log Duration	-0.852*** (0.140)	-0.366* (0.216)	-0.338 (0.374)	-0.567 (0.509)	0.062 (0.500)	0.794 (0.587)	-0.758*** (0.300)	-1.230*** (0.366)
Calendar time	-0.009 (0.026)	-0.017 (0.032)	0.078 (0.071)	0.080 (0.075)	-0.277*** (0.107)	-0.276*** (0.111)	0.047 (0.050)	0.157* (0.086)
Age 25-29 (19-24)	0.410 (0.258)	0.486* (0.278)	0.962 (0.907)	0.921 (0.968)	-0.251 (1.015)	-0.348 (1.035)	-1.216*** (0.494)	-2.960*** (1.208)
30-34	0.653*** (0.274)	0.912*** (0.311)	1.242 (0.945)	1.085 (1.099)	-0.235 (1.126)	-0.102 (1.158)	-0.044 (0.460)	-2.473** (1.261)
35-39	0.694** (0.300)	1.110*** (0.369)	1.458 (0.980)	1.345 (1.127)	1.560 (0.987)	1.902* (1.025)	-1.083* (0.624)	-3.576*** (1.386)
older than 40	0.954*** (0.293)	1.047*** (0.332)	1.583 (0.976)	1.581 (1.040)	1.382 (0.978)	1.273 (0.997)	0.201 (0.492)	-1.478 (1.261)
marital status (married)	0.065 (0.197)	-0.107 (0.250)	0.445 (0.556)	0.495 (0.656)	0.689 (0.737)	0.309 (0.766)	-1.090* (0.596)	-1.520* (0.887)
head of household (no)	0.275 (0.223)	0.489* (0.258)	0.106 (0.623)	-0.269 (0.924)	-0.116 (0.756)	0.192 (0.776)	-1.759*** (0.576)	-3.864*** (1.199)
has a child (no)	0.023 (0.159)	-0.127 (0.194)	0.797* (0.478)	0.982* (0.577)	0.103 (0.587)	-0.066 (0.607)	0.539* (0.311)	1.076** (0.496)
High school degree (no degree)	0.338** (0.161)	0.118** (0.208)	0.584 (0.496)	0.714 (0.536)	0.583 (0.597)	0.330 (0.632)	0.565* (0.321)	1.035** (0.485)
Higher education	0.931*** (0.256)	1.049*** (0.347)	1.568* (0.652)	1.477** (0.696)	1.280 (0.879)	1.342 (0.913)	1.062** (0.510)	1.315* (0.782)
Industry and primary sector (comm. services)	-0.173 (0.165)	-0.183 (0.201)	0.041 (0.477)	0.118 (0.497)	1.134* (0.658)	0.974 (0.690)	-0.085 (0.317)	-0.321 (0.468)
Non commercial services	-0.181* (0.183)	-0.298 (0.222)	0.162 (0.494)	0.289 (0.549)	0.501 (0.678)	0.322 (0.725)	-0.220 (0.375)	-0.615 (0.603)
White collar (no)	0.250** (0.164)	0.386* (0.218)	0.314 (0.423)	0.342 (0.441)	0.749 (0.534)	0.926 (0.579)	-0.278 (0.369)	-0.486 (0.486)
Hours of work	0.018** (0.008)	0.024** (0.011)	0.050*** (0.016)	0.043** (0.019)	-0.031 (0.026)	-0.040 (0.029)	0.011 (0.015)	-0.011 (0.021)
Contract (permanent)	0.260 (0.269)	0.423 (0.327)	-0.339 (0.814)	-0.461 (0.841)	1.378* (0.790)	1.827** (0.835)	0.817** (0.401)	0.954* (0.585)
Second job (no)	0.565* (0.316)	0.877** (0.388)	2.394*** (0.541)	2.172*** (0.671)	-0.007 (0.962)	0.177 (0.984)	0.415 (0.588)	-0.527 (0.925)
Unempl. before first job (no)	-0.360 (0.595)	-0.437 (0.640)	0.784 (1.217)	0.921 (1.257)	-6.994* (52.011)	-7.446 (52.016)	-0.344*** (0.694)	-1.511 (1.956)
Class 1	-1.923*** (0.694)	-1.922** (0.847)	-7.943*** (1.955)	-7.837*** (2.064)	-5.296** (2.563)	-4.745* (2.646)	-0.925 (1.553)	-1.327 (2.248)
Class 2		-5.365*** (1.355)		-6.777*** (2.689)		-12.1862 (10.839)		4.6277 (2.959)
Transitions	453	453	33	33	20	20	72	72
Observations	1094							
Log-likelihood	-1,067.51		-1,056.48					
R ²	0.081		0.288					
Robust standard errors in brackets								
Reference category in brackets								
* significant at 10%; ** significant at 5%; *** significant at 1%								

Table 3c: Estimation results of the competing risks model, Germany

	non-low pay	self-employment	unemployment	other
Log Duration	0.350**	0.185	0.334	0.493**
	[0.177]	[0.655]	[0.212]	[0.240]
time	-0.099***	-0.157*	-0.020	0.011
	[0.031]	[0.088]	[0.040]	[0.044]
marital status	0.226	0.863	-0.318	0.672*
	[0.273]	[0.991]	[0.292]	[0.383]
Head of household?	-0.418*	-2.217***	-0.194	0.363
	[0.228]	[0.859]	[0.261]	[0.323]
Has kids?	0.018	0.855	-0.322	0.062
	[0.183]	[0.678]	[0.229]	[0.224]
High school	0.552**	0.187	-0.210	0.288
	[0.217]	[0.841]	[0.263]	[0.266]
Higher than high school	1.576***	-1.255	-0.674	0.123
	[0.364]	[1.176]	[0.706]	[0.600]
Receiving training this year	-0.185	-1.777**	0.644	-0.340
	[0.267]	[0.718]	[0.451]	[0.349]
Is in apprenticeship?	-0.591**	-1.136**	-0.936*	-1.060***
	[0.295]	[0.566]	[0.503]	[0.354]
Unemployment spell	0.304	-32.799***	1.034***	0.298
	[0.296]	[0.663]	[0.316]	[0.455]
industry	0.017	-0.058	-0.194	-0.092
	[0.097]	[0.235]	[0.124]	[0.126]
contract	0.056	1.007	-0.811***	-0.571*
	[0.204]	[0.637]	[0.265]	[0.309]
part-time employment	0.698**	-0.472	1.148*	-0.396
	[0.329]	[0.663]	[0.592]	[0.357]
Has a second job?	-0.134	2.625***	-38.759***	0.817
	[0.527]	[0.643]	[0.408]	[0.629]
Had a job change last year?	0.300	-1.381**	0.387	0.032
	[0.190]	[0.624]	[0.244]	[0.313]
tenure	0.124***	0.280***	0.064	0.072
	[0.040]	[0.105]	[0.057]	[0.057]
Constant	-2.224**	0.445	-2,420	-1,968
	[1.088]	[2.510]	[1.716]	[1.358]
Observations	1317	1317	1317	1317
Log likelihood	-1,215,811			
R2	0.089			

Robust standard errors in brackets

* significant at 10%; ** significant at 5%; *** significant at 1%

Table 3d: Estimation results of the competing risks model, Germany

	non-low pay		self-employed		unemployed		other	
	no control for uh	controlling for uh	no control for uh	controlling for uh	no control for uh	controlling for uh	no control for uh	controlling for uh
Calendar time	-0.068** (0.026)	-0.061** (0.027)	-0.160* (0.091)	-0.464** (0.158)	-0.050 (0.032)	-0.043 (0.032)	-0.013 (0.031)	-0.062 (0.040)
Apprenticeship (no)	-1.219*** (0.333)	-1.256*** (0.336)	-1.671 (1.101)	-6.748 (2.048)	-1.001*** (0.462)	-1.023*** (0.466)	-1.566*** (0.364)	-2.665*** (0.622)
Log duration	0.228 (0.142)	0.233 (0.144)	0.002 (0.469)	3.610 (1.215)	-0.039 (0.176)	-0.060 (0.178)	-0.165 (0.205)	0.485 (0.306)
Log duration for apprentices	1.550*** (0.319)	1.607*** (0.327)	1.201 (1.174)	5.099*** (1.579)	1.775*** (0.386)	1.841*** (0.395)	1.805*** (0.360)	2.885*** (0.591)
Age 25-29 (18-23)	0.087 (0.227)	0.054 (0.229)	-0.784 (0.933)	-1.874 (1.229)	0.537* (0.293)	0.527* (0.295)	-0.805*** (0.293)	-1.226*** (0.364)
30-34	-0.108 (0.280)	-0.139 (0.281)	0.011 (0.986)	-2.881** (1.597)	0.378 (0.364)	0.385 (0.366)	-1.154*** (0.400)	-2.281*** (0.635)
35-39	-0.341 (0.322)	-0.367 (0.322)	0.731 (1.129)	-0.977 (1.842)	0.273 (0.388)	0.251 (0.389)	-1.759*** (0.533)	-2.108*** (0.720)
older than 40	-0.529 (0.330)	-0.558* (0.331)	1.591 (1.020)	2.513 (1.636)	0.880*** (0.359)	0.883*** (0.359)	-1.412*** (0.487)	-1.470*** (0.625)
Nationality (German)	0.356*** (0.106)	0.350*** (0.106)	0.007 (0.420)	-0.923 (0.674)	0.143 (0.138)	0.151 (0.139)	-0.147 (0.145)	-0.397* (0.211)
Marital status (married)	-0.091 (0.214)	-0.103 (0.215)	0.599 (0.712)	3.340** (1.424)	0.114 (0.246)	0.092 (0.247)	-0.135 (0.318)	0.422 (0.475)
Head of household (yes)	-0.377** (0.166)	-0.373** (0.166)	-0.259 (0.575)	-0.391 (0.942)	-0.007 (0.199)	0.006 (0.200)	0.091 (0.247)	-0.054 (0.301)
Has kids (no)	0.021 (0.154)	0.009 (0.155)	0.175 (0.522)	0.358 (0.731)	-0.092 (0.183)	-0.099 (0.183)	-0.102 (0.187)	-0.122 (0.231)
High school (lower than high school)	0.633*** (0.188)	0.645*** (0.188)	0.617 (0.624)	-0.632 (1.060)	-0.124 (0.224)	-0.124 (0.225)	0.551*** (0.215)	0.770*** (0.272)
Higher than high school	1.494*** (0.326)	1.511*** (0.327)	2.014** (0.910)	3.744** (1.388)	0.012 (0.471)	0.009 (0.473)	0.508 (0.503)	1.256 (0.577)
Receiving training (yes)	0.236 (0.226)	0.238 (0.227)	-1.048 (0.685)	-1.560 (1.058)	0.877*** (0.352)	0.898*** (0.353)	0.030 (0.275)	0.007 (0.326)
Industry (agriculture)	0.081 (0.077)	0.084 (0.077)	0.226 (0.258)	0.807 (0.455)	-0.132 (0.094)	-0.128 (0.094)	-0.009 (0.102)	0.060 (0.125)
Firm size (less than 5 employees)	0.235*** (0.070)	0.230*** (0.070)	-0.730*** (0.250)	-1.174*** (0.448)	-0.015 (0.086)	-0.019 (0.086)	0.067 (0.089)	0.016 (0.111)
Contract (temporary)	0.088 (0.192)	0.086 (0.192)	0.181 (0.646)	0.319 (1.079)	-0.460** (0.229)	-0.467** (0.230)	-0.115 (0.249)	-0.132 (0.307)
Parttime (part-time)	0.803*** (0.281)	0.773*** (0.282)	-0.820 (0.577)	-1.607* (0.924)	1.348*** (0.483)	1.344*** (0.483)	-0.694*** (0.266)	-1.108*** (0.324)
Second job (no)	0.130 (0.426)	0.180 (0.428)	1.309 (0.851)	2.598* (1.454)	-0.530 (0.748)	-0.506 (0.749)	0.480 (0.480)	0.551 (0.602)
Job change (no)	0.457*** (0.182)	0.448*** (0.183)	-1.651 (1.099)	-2.329 (1.937)	0.424** (0.214)	0.410* (0.215)	0.057 (0.268)	-0.313 (0.376)
Tenure	0.110*** (0.033)	0.106*** (0.033)	0.232*** (0.081)	0.430*** (0.143)	0.032 (0.045)	0.030 (0.045)	0.139*** (0.043)	0.126** (0.054)
Unempl. before first job (no)	0.426 (0.264)	0.444 (0.265)	0.455 (0.855)	-0.784 (1.458)	1.156*** (0.256)	1.166*** (0.257)	0.857*** (0.346)	0.720 (0.552)
Class 1	-4.367*** (0.943)	-4.273*** (0.940)	-0.377 (2.625)	-4.948 (4.812)	-5.403*** (1.372)	-5.406*** (1.369)	-0.185 (1.124)	-0.223 (1.454)
Class 2		-4.6744 (3.980)		9.873** (4.773)		-6.4451 (4.992)		7.193*** (1.710)
Transitions	301	301	22	22	193	193	166	166
Observations	2,074							
Log Likelihood	-1,900.52	-1,883.17						
R ²	0.109	0.16						
Robust standard errors in brackets								
Reference categories in brackets								
* significant at 10%; ** significant at 5%; *** significant at 1%								

Figure 1: Percentage of low paid employees

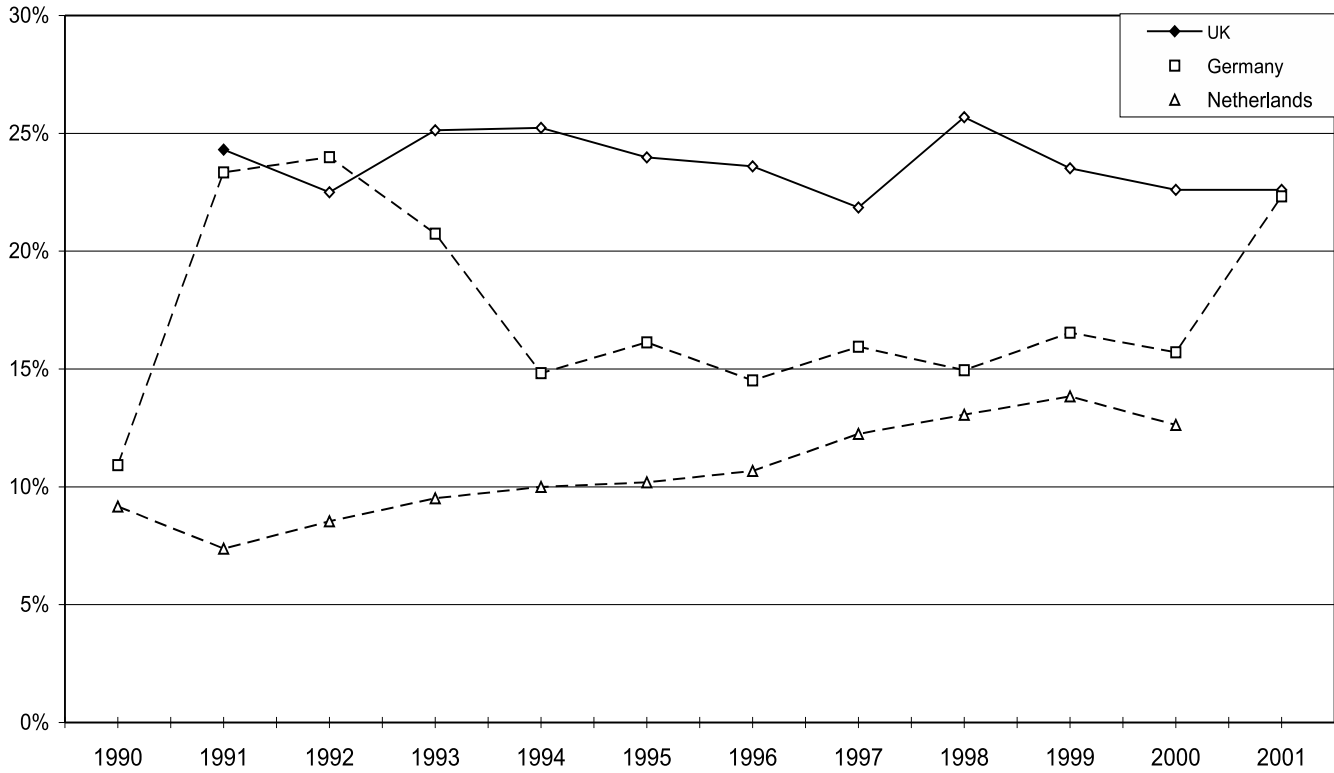


Figure 2: Duration of low pay: Cumulative staying probability

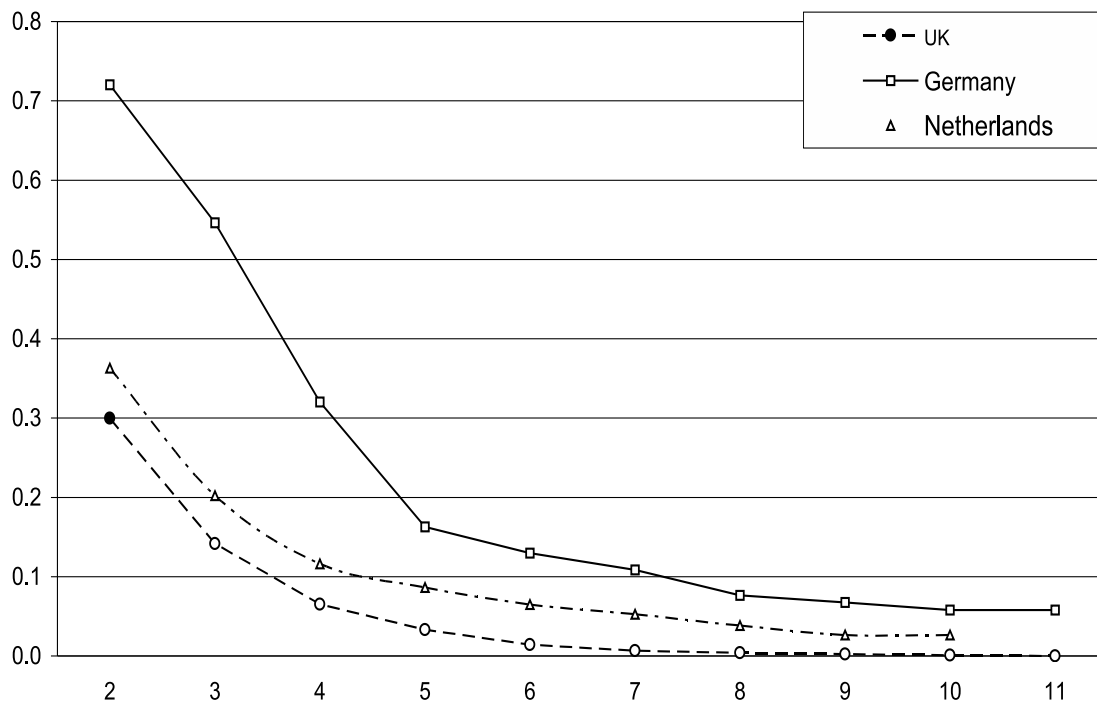


Figure 3a: Cumulative staying probability per educational level, UK

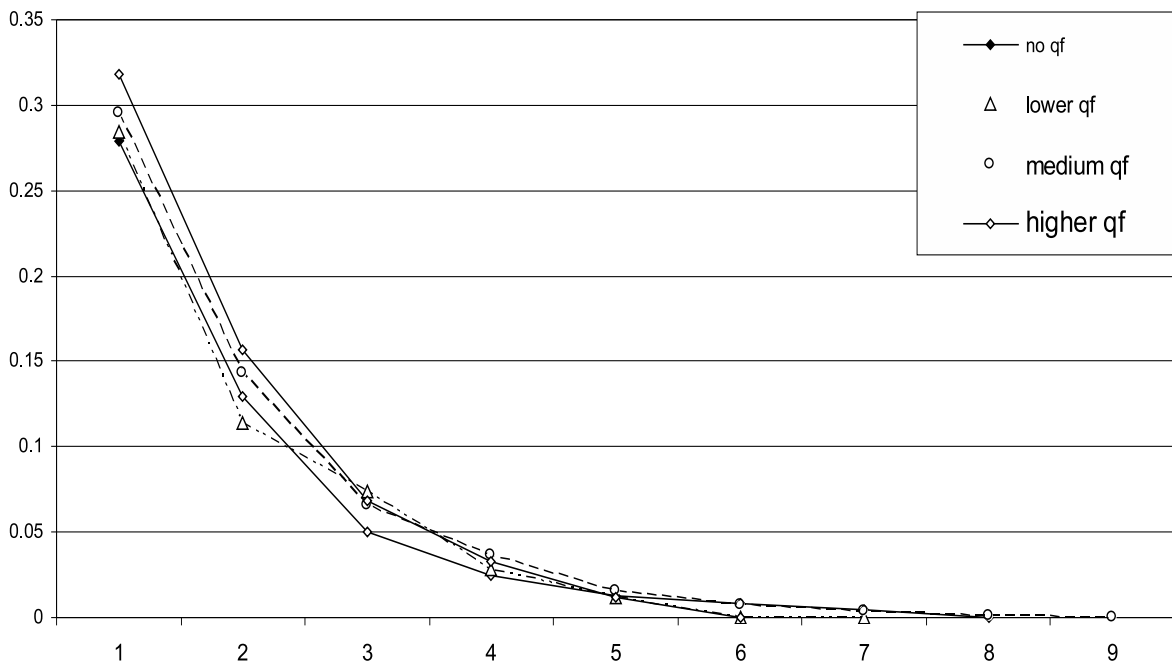


Figure 3b: Cumulative staying probability per educational level, Germany

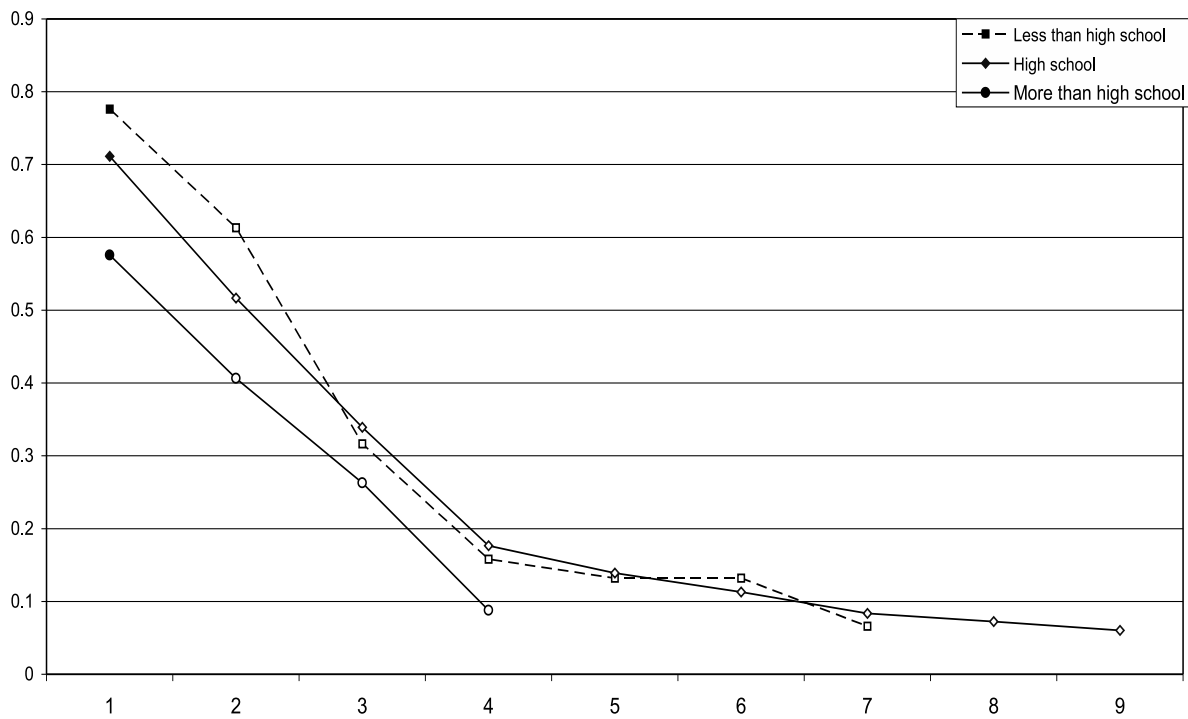


Figure 3c: Cumulative staying probability per education level, NL

