

THE DYNAMICS OF THE NATIONAL MINIMUM WAGE: TRANSITIONS BETWEEN DIFFERENT LABOUR MARKET STATES

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ABSTRACT

Two important policy issues connected to the introduction of the National Minimum Wage (NMW) in April 1999 are the incidence of employment at the NMW for different types of workers and whether the NMW acts as a stepping stone to higher wages or traps workers in a low-wage – no-wage cycle. In this paper we utilise the longitudinal element of the Labour Force Survey over the period 1999 to 2003 to model transitions between different labour market states – payment at or below the NMW, above the NMW, unemployment and inactivity - using a multinomial logit approach. The results are used to model the steady state distribution of employment at the NMW for different types of worker. In addition it appears that for many workers payment at or below the NMW is of relatively short duration and a substantial number move into higher paid jobs.

JEL Classification: J0, J38, J60

Keywords, National Minimum Wage, Transitions, Steady State Distributions

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INTRODUCTION

A National Minimum Wage (NMW) was introduced in the UK for the first time in April 1999. Acting on advice from the Low Pay Commission (LPC) the government initially set the adult rate at £3.60 per hour and the youth, or development, rate (for those aged 18 to 21) at £3.00 per hour. Since then the NMW has been regularly updated (see Table 1), normally in October of each year, and in October 2005 the adult rate and youth rates are set to increase to £5.05 and £4.25 per hour respectively. The NMW is now a well-established feature of the UK labour market and alongside Tax Credits and the New Deal it is seen as being an integral part of a government policy designed to tackle poverty and increase labour market participation (DTI, 2004). The UK is unique among advanced industrial countries, as the NMW was only introduced recently and so provides a natural experiment in which one can assess the impact of raising wages for low paid workers on the incidence of NMW employment and the duration of employment at the NMW for different types of workers. This paper, therefore, focuses on two specific questions. First, what is the steady state distribution of employment at the NMW? Second, what is the expected duration of NMW employment and what is the destination of workers paid at the NMW?

Given the NMW is a major labour market intervention it is not surprising that it has increasingly attracted the attention of economists who are interested in examining the impacts it has had on labour market outcomes. Metcalf (2002, and 2004) provides an excellent and concise summary of some of the key findings, which have variously looked at issues related to coverage and the effect the NMW has had on employment, the wage distribution, and training. The general consensus from the UK literature is that the NMW has been a success. For example, NMW has improved the relative position of

individuals in the bottom decile of the pay distribution without having created any major spillover effects further up the distribution (Dickens and Manning, 2004, and Stewart and Swaffield, 2002); there appear to be no adverse employment effects associated with the introduction of the NMW, even in those regions or sectors where it might have been expected to have the greatest impact (Dickens, 2001; Stewart, 2002, and Machin et al, 2003); and there is little evidence to suggest that the NMW has reduced the training of affected workers, in fact quite the reverse as there is evidence to suggest that training intensity has actually increased for many of these workers (Arulampalam et al, 2004). However, the effect on training of recent up-ratings to the NMW, which are quite substantial, remain to be examined.

Despite the work that has already been done on assessing the impacts of the NMW in the UK, there are still a number of areas that remain under explored. Thus, while there is now good information on which groups are most likely to be affected by the NMW, much less is known about the movements of individuals to and from jobs covered by the NMW. And yet, a fundamental question relating to the assessment of the impact of the National Minimum Wage (NMW) is not simply about how many employees are affected by it, either directly or indirectly, but also about what happens to these individuals over time. Specifically it is of interest to policy makers to know whether the NMW is a stepping-stone to higher wages or a trap from which it is difficult to escape, unless it is to from a low-wage to a no-wage cycle. Obviously if minimum wage jobs are mainly entry level jobs that only have a short-term effect on lifetime

earnings this is a much less serious policy issue than if they are mainly dead-end jobs, providing workers with few opportunities to escape to better paid jobs¹.

This paper considers some of these important issues by exploiting the longitudinal element of the Labour Force Survey (LFS) to model transitions between various labour market states and the NMW. The analysis not only provides estimates of transition rates to and from jobs at or below the NMW but also steady state estimates of the distribution of ‘workers’ across different labour market states and an estimate of how long different types of workers might be expected to remain in jobs paid at or below the NMW. The LFS is used because among UK data sets it is sufficiently large to enable the analysis to distinguish between different possible labour market destinations of NMW workers, while also allowing the identification of types of workers who may be affected by the NMW differently. However, the use of this data does have costs. For example, an interesting question that cannot be answered with this data is what effect the introduction of NMW had on those workers who earned less than the NMW before its introduction and a wage equal to the NMW after its introduction. Are these workers less or more likely to move to higher paying jobs subsequently or are they more likely to move to other labour market destinations? The limited panel nature of the LFS precludes us from answering this question here. Nor given the short period since the introduction of the NMW can we say whether those leaving the NMW in one period are more likely to return to NMW employment later. What we can do, however, is provide information about a previously unexplored theme in the NMW literature, namely the dynamics of escaping NMW employment, which has important implications for policy makers in determining whether to up rate the NMW.

¹ Recently Neumark and Nizalova (2004) have shown for the US that even by their late 20s individuals who have been on the minimum wage longer earn less and work less than other workers.

PREVIOUS WORK

As far as we are aware direct evidence on the dynamics of minimum wages is limited to limited to work undertaken in the USA. One study (Smith and Vavrichek, 1992) reported that over 60% of workers in receipt of the minimum wage in 1984 were earning more than the minimum one year later. In another study Evan and McPherson (2003) compared minimum wage workers with a comparison group earning above the minimum, using panel data drawn from the Current Population Survey over the period 1979-1999. Their evidence suggests that minimum wage jobs tend to be entry-level jobs and that they are also of short duration for a large majority of workers. Factors most likely to assist wage growth (or movement above the minimum) are education and training and changes of industry and occupation.

More recently Grossberg and Sicilian (2004) have provided some theoretical underpinnings to why the introduction of the NMW might affect labour turnover. On the one hand increasing rents enjoyed by NMW workers means they are less likely to quit as the difference between the current wage and the expected wage from moving is reduced. On the other hand the compression of the wage structure means that workers are less able to infer non-pecuniary aspects of other jobs from wage offers, which is likely to increase the quit rate from new jobs. Firms may also react by reducing non-wage benefits to offset the introduction of the NMW. Search costs may also be increased as firms become more selective in hiring workers to low paid jobs. The net effect on turn-over is, therefore, indeterminate, though Grossberg and Sicilian find some evidence that where the minimum wage in the US is low, separation rates for men at the minimum wage are reduced.

As far as Britain is concerned work on the dynamics of low pay has some relevance (see, for example, Asplund, Sloane and Theodossiou, editors, 1988, Stewart and Swaffield, 1999 and Sloane and Theodossiou, 2000). One may summarise this literature as suggesting the longer workers remain in low paid jobs then the more difficult it becomes to escape from them (low pay persistence). This scarring effect of low pay can arise as a consequence of the characteristics of individuals themselves (heterogeneity) or the carry over of the experience of low pay from one period to the next (structural dependence). The evidence suggests that the latter is much more important than the former. As well as having a relatively high probability of remaining low paid, this group is also more likely to move out of employment (the low-pay, no-pay cycle). There is no evidence that low paid jobs act as stepping-stones to higher paid jobs, which might offset the above disadvantage for some. Therefore, it does appear that experience of low pay causes some workers to be trapped there. Low pay appears also to be associated with long-run earnings inequality in the sense that as the earnings distribution widens the number of workers classified as low paid increases. To some extent, institutional arrangements, such as union membership and collective bargaining coverage, serve to moderate these effects by compressing the lower tail of the earnings distribution. Yet, we should be cautious in equating low pay with minimum pay. First, minimum wage workers are located at a lower moment in the earnings distribution than low-paid workers, who are conventionally defined as earning less than two-thirds of the male median wage and who are not subject to statutory wage provisions. Second, there are statistical problems in using standard data sets to identify those subject to the minimum wage that are much more severe than is the case with respect to low-paid workers.

A number of studies have focused on the incidence of minimum wages for particular groups in the labour market. The LPC itself estimated at the time of the introduction of the NMW in 1999 that it would impact on 3 per cent of male full-timers, 26 per cent of male part-timers, 5 per cent of female full-timers and 22 per cent of female part-timers, implying that three-quarters of the recipients would be female. Despite this Dex, Sutherland and Joshi (2000) estimated the effect on the gender pay gap to be small. This result was confirmed by Robinson (2002) who suggests, on the basis of a simulation using the 1999 Labour Force Survey, it would require a NMW as high as £5 per hour to reduce the pay gap by 3 percentage points.

METHODOLOGY

Following an approach used to model intra-firm mobility by Ransom and Oaxaca (2005) we assume movements to and from the NMW are determined by a Markov model, in which information on the distribution of the working age population across different labour market states at adjacent points in time are used in conjunction with an appropriately defined transition matrix - describing the probability of moving from one labour market state to another - to define a steady state labour market distribution. Formally, let P_t be a $(1 \times k)$ vector whose elements show the proportion of individuals occupying k labour market states at time t . Similarly, let Ω be a $(k \times k)$ transition matrix whose ij th element, ω_{ij} , indicates the probability of moving from labour market state i in period $t-1$ to labour market state j in period t . The i th row of Ω , therefore, shows the probabilities of moving from state i in period $t-1$ to each of the k possible labour market destinations at time t . The sum of these probabilities, therefore, must by definition sum to unity. It follows that:

$$P_t = P_{t-1}\Omega \tag{1}$$

which on recursively substituting for P_{t-1} can be shown to equal:

$$P_t = P_0 \Omega^t \quad (2)$$

where P_0 is the initial distribution of the population across each labour market state.

Assuming the steady state labour market distribution is stationary, and independent of the initial distribution, Ransom and Oaxaca (2005) show that the elements of P^* can be recovered from:

$$P_1^* = 1 - \sum_{i=2}^k P_i^* \quad \text{and} \quad P_j^* = \sum_{i=1}^k \omega_{ij} P_i^* \quad \text{for } j = 2, 3, \dots, k \quad (3)$$

Alternatively P^* can be written in matrix notation as:

$$P^* = P^* \tilde{\Omega} + q \quad (4)$$

which on solving for the steady state vector P^* gives:

$$P^* = q(I_k - \tilde{\Omega})^{-1} \quad (5)$$

where $P^* = (P_1^*, P_2^*, \dots, P_k^*)$, $\tilde{\Omega} = \begin{pmatrix} 0 & \omega_{12} & \omega_{13} & \dots & \omega_{1k} \\ -1 & \omega_{22} & \omega_{23} & \dots & \omega_{2k} \\ \cdot & \cdot & \cdot & \dots & \cdot \\ \cdot & \cdot & \cdot & \dots & \cdot \\ \cdot & \cdot & \cdot & \dots & \cdot \\ -1 & \omega_{k2} & \omega_{k3} & \dots & \omega_{kk} \end{pmatrix}$, $q = (1, 0, 0, \dots, 0)$ and I_k is a

(kxk) identity matrix.

In the analysis reported below the elements of the transition matrix Ω required to solve (5) are derived in two ways. First, at the aggregate level, and where there are a large number of observations (i.e., for all workers and for males and females separately), the required elements of Ω can be found from observed transitions using the following estimator suggested by Ransom and Oaxaca (2005):

$$\hat{\omega}_{ij} = \frac{\sum_{t=2}^T E_{ijt}}{\sum_{t=2}^T N_{i,t-1}} \quad (6)$$

where E_{ijt} is the number of individuals in labour market state j in year t who occupied labour market state i in year $t-1$, and $N_{i,t-1}$ is the number of individuals in labour market state i in year $t-1$.

Second, the required elements of Ω are also estimated from a multinomial logit model, which considers the probability of an individual moving between different labour market states between periods $t-1$ and t . Specifically, if Y_p indicates the destination of the p th individual, who starts in the i th labour market state at time $t-1$ and moves to the j th labour market state at time t , then using the multinomial logit model the probability of a ij th transition for the p th individual is given by:

$$\Pr \text{ob}(Y_{pt} = j | Y_{pt-1} = i) = \frac{\exp^{X_p \beta_{ij}}}{\sum_{j=1}^k \exp^{X_p \beta_{ij}}} \quad \left\{ \begin{array}{l} p = 1, 2, \dots, N_i \\ j = 1, 2, \dots, k \end{array} \right\} \text{ for } i = 1, 2, \dots, k \quad (7)$$

where X is a set of individual characteristics determining an individual's destination at time t , β_{ij} is a conformable vector of parameters for the ij th transition, and N_i and k are defined as above².

The elements of the transition matrix, Ω , are then estimated by taking an average of these probabilities for different types of individuals. For example, suppose a steady state labour market distribution is required for a sub-group of the working age

² In the multinomial logit model the sum of probabilities across each of the k possible outcomes must by definition equal unity. As a result of this only $k-1$ parameters sets are needed to determine the k outcome probabilities. When estimating a multinomial model, therefore, one set of parameters can be normalized to zero. In each of the specifications reported below the labour market state chosen for this normalization was always the largest group.

population (e.g., classified according to gender, qualifications, age, etc.), then the elements of Ω^m for this group of individuals, say the m th group, are found from:

$$\hat{\omega}_{ij}^m = \frac{1}{N_i^m} \sum_{p=1}^{N_i^m} \frac{\exp X_p \hat{\beta}_{ij}}{\sum_{j=1}^k \exp X_p \hat{\beta}_{ij}} \quad \text{for } i=1,2,\dots, k \text{ and } j=1,2,\dots,k \quad (8)$$

That is the estimated transition probabilities are averages of the estimated probabilities from the multinomial logit model, where the average in each case is based on the characteristics of the N_i^m individuals from group m that occupy i th labour market state at time $t-1$. Expression (8), therefore, is the multinomial equivalent of (6). However, using (8) to simulate the transition probabilities for different groups of individuals does have certain advantages, particularly when the numbers of individuals falling within a group of interest are not sufficiently large to justify the use of observed transition probabilities. For this reason expression (8) was typically used to estimate the elements of Ω used in the analysis reported below. However, in order to allow a comparison to be made between the steady states produced by these two methods, steady state labour market distributions based on expressions (7) and (8) were derived for males and females separately. Somewhat reassuringly, the distributions produced by each method for these two major sub-groups were virtually identical.

Finally estimates of the transition matrix are also used to provide an estimate of the duration different types of individuals are likely to stay in jobs paid at or below the NMW. Specifically if the exit probability from being paid at or below the NMW for individuals belonging to the m th group is λ_m , then these individuals can expect to remain at or below the NMW for:

$$E(D_{NMW}^m) = \frac{1}{\lambda_m} \quad (9)$$

where $E(D_{NMW}^m)$ is the expected time paid at or below the NMW for individuals in the m th group and λ_m is found by summing the $(k-1)$ elements in the i th row of Ω^m showing the exit probabilities of individuals employed at or below the NMW at time $t-1$ to other labour market destinations at time t , i.e., $\lambda_m = \sum_{j \neq i} \omega_{ij}^m$.

DATA

The analysis is based on the longitudinal element of the Labour Force Survey (LFS)³. The LFS is a quarterly household survey, which collects information on a range of labour market issues. Individuals enter the survey in wave 1 and then remain in the survey for 5 subsequent waves (one year) on a strict rotational basis. Hence in each quarter of the LFS one-fifth of individuals will be having their first interview and one-fifth their last interview. This rotational element to the LFS creates an 80 per cent overlap between quarters and thus 20 per cent of the sample enter and exit the survey each quarter. As questions relating to labour market income are only asked in waves 1 and 5 of the LFS, annual longitudinal data sets provided by the Office of National Statistics were used in the analysis reported below. These longitudinal data sets are derived from the information provided by individuals at their first and fifth interviews⁴. Thus while the time period covered by any given longitudinal data set is one calendar year, longitudinal data sets can be created on a quarterly basis. For this analysis, therefore, we used 15 longitudinal sets running from Spring 1999/2000 to Autumn

³ The British Household Panel Survey (BHPS) was considered as a possible alternative to the LFS. However, although the BHPS tracks individuals over a longer time period and so records information on individuals full work history it is not possible to calculate a wage rate for any job changes that occur between annual interviews. For this reason, and because the LFS is a much larger survey, we decided to base the analysis on the LFS.

⁴ As a result the analysis focuses only on labour market transitions observed between waves 1 and 5.

2002/2003⁵. Each data set contained approximately 10,000 individuals from which we pre-selected only those individuals that were adults and of working age (i.e. those aged 22 or more but less than 65 and 60 for men and women respectively)⁶.

Before any analysis could be undertaken an important data issue that needed to be decided was the pay measure to be used in the analysis? Two measures of pay are provided in the LFS. One is a derived hourly pay measure, which is known to be subject to measurement error as it includes bonuses and other pay, which are not normally included in the basic hourly wage rate. The other is a direct hourly wage rate variable, which was introduced into the LFS in March 1999 as an attempt to address some of the problems associated with the derived pay measure. The use of the direct measure of hourly pay has been shown to offer certain advantages over the derived hourly pay measure, particularly when issues of compliance with NMW legislation are being considered (see Dickens and Manning, 2004). However, the downside to using this measure is that it is only available for a limited number of respondents, namely those paid by the hour; and even though Stewart and Swaffield (2002) have shown that while almost 83 per cent of the beneficiaries of the minimum wage are hourly paid, the limited coverage provided by the measure – only about 40 per cent of those in employment - means that it is not suitable for estimating steady state labour market distributions. For this reason, therefore, we decided to base the analysis on the derived hourly pay rate⁷.

⁵ To coincide with the implementation of the NMW the Spring quarter of 1999 was defined as starting in April.

⁶ Choosing to base the analysis on adults only removed the added complication of having to deal with the development rate for individuals aged between 18 and 21. However, the results of the analysis were not sensitive to this restriction.

⁷ The alternative of using the method suggested by Skinner et al (2002) to simulate missing data on the direct hourly pay measure was not considered appropriate in this case because the impact of the procedure would be to swap one kind of measurement error for another.

Using the derived hourly pay measure does, however, have an important implication for the way in which the analysis is conducted. The problem stems from the well known fact that unlike the direct measure of hourly pay the derived hourly pay measure in the LFS does not have a clearly identified mass point of data at the NMW. To illustrate this point we compared the percentage of workers paid exactly the minimum wage to the percentage that were paid below the national minimum using both the derived and direct measures of pay. Using the direct pay measure 1.2 per cent were paid below the minimum while 5.8 per cent were paid the national minimum exactly. Using the derived hourly pay measure the equivalent figures were 5.5 per cent and 0.3 per cent respectively. As there are too few individuals that are paid exactly the national minimum under the derived pay measure to model transitions, we decided to take the pragmatic step of defining those individuals paid at or below the NMW to be group most likely to be affected by the legislation.

RESULTS

Some preliminary insights into extent to which individuals move across different labour market boundaries are provided by the transition rates reported in Table 2. These transition rates are calculated on the basis of expression (7) and cover annual periods from the Spring quarter of 1999 to the Autumn quarter of 2002. Four labour market destinations are distinguished in the analysis, ($k=4$), namely paid at or below the NMW, paid above the NMW, unemployed (ILO definition), and economically inactive. Separate transition matrices are reported for (i) all individuals of working age (i.e., for males and females combined), (ii) for males only, and (iii) for females only. Three features of the data are worth noting.

First, according to Table 2 section (i), which shows the transition matrix for all individuals, it can be seen that 32.3 per cent of individuals who are paid at or below the NMW at their initial interview remain in that state at their final interview one year later, 55.6 per cent move to employment above the NMW in the same period, 2.9 per cent exit to unemployment, and 9.2 per cent become inactive. Second, movements into employment paid at or below the NMW from other labour market destinations are small in relative terms, only 5.1 per cent from unemployment, 3.1 per cent from employment above the NMW and 1.4 per cent from economic inactivity, even though the numbers involved relative to the stock of individuals paid at or below the NMW can be quite large depending on the size of the stock from which the inflow originates. Third, men are more likely to move out of minimum wage employment than women (60.8 per cent of men move from minimum wage employment to higher wage employment compared to only 54.1 per cent of women, i.e., Table 2 sections (ii) and (iii) respectively). Thus, while these transitions rates suggest a measure of persistence at wages at or below the NMW for some workers, for the majority minimum wage employment seems to be only a temporary phenomenon.

Of course it is possible that many workers who exit pay at or below the NMW do so to jobs that only just pay more than the NMW. To check this possibility we divided those moving out of pay at or below the minimum into higher paying jobs into ranges of 5%, 10%, 20%, 30% and 50% above the NMW. The results of this exercise are shown in Table 3, and two things stand out from it. First, for many moving to pay positions above the NMW the adjustment is substantial, particularly as the period covered by the data is just 12 months. Second, not only are men more likely to move out of minimum

wage payment into higher pay than women, but the size of the upward adjustment is also typically greater for men than it is for women. Along with the information provided in Table 2, therefore, these data suggest significant upward mobility in this lower segment of the earnings distribution⁸.

Multinomial Logit Estimates

The variables used to estimate the multinomial logit model are fairly standard and include a range of personal characteristics (e.g. age, gender, qualifications), household characteristics (e.g. number of dependent children), type of housing tenure, and regional and time dummies⁹. In addition for individuals who were employed at their first interview a set of variables relating to their current job (e.g. industry sector, employment tenure) were also included. The value taken for each variable was determined by responses given by individuals at their first interview, and a full description of the variables used in the analysis is given in Table A1 in the appendix, variable means tabulated by labour market status are also reported in Table A2.

The results of estimating the multinomial transition model for each of the initial four labour market states identified in the analysis are shown in Tables 4a to 4d. Table 4a considers the position of individuals initially paid at or below the NMW at their first interview and then considers whether they remain at or below the NMW at their final interview, move to employment above the NMW, unemployment, or to economic inactivity. Similarly, Table 4b considers what happens to individuals that were initially

⁸ Given the nature of the data, however, we are unable to say much about what the long term effects of being paid at the NMW are, and in particular what proportion might return to NMW employment in the future.

⁹ Time dummies are included in the model for two reasons. First, they allow for the effect that common macroeconomic shocks may have on labour market transition rates. Second, and equally important, they capture any effect on transition rates caused by changes in the NMW, particularly where such changes may have had implications for the severity of the policy.

paid above the NMW, and Tables 4c and 4d does the same for individuals that were either initially unemployed or economically inactive respectively.

The main column headings reported in Tables 4a to 4d indicate potential labour market destinations, while the column entries themselves show marginal probability effects. These indicate the effect that a designated variable has on the probability of an individual occupying each of the different labour market destinations identified at the end of the year given the position they occupied at the start of the year¹⁰. Thus in Table 4a the results show that relative to women, men initially employed at or below the NMW are 3.7 per cent less likely to be in employment at or below the NMW by the end of the year, 6.1 per cent more likely to move to employment above the NMW, 1.3 per cent more likely to move to unemployment, and 3.6 per cent less likely to move to economic inactivity¹¹. The stars reported at the side of each marginal effect indicate the significance of the effect; one star indicates significance at the 10 per cent level, two stars significance at the 5 per cent level, and three stars significance at the 1 per cent level.

As the primary purpose of the results reported in Tables 4a to 4d is to estimate steady state labour market distributions and the time different groups of individuals might expect to remain employed at the NMW, we decided that while it was necessary to present the estimates it was not necessary to give a detailed description of them. Instead, in the interests of parsimony, we turn immediately to the main results of the analysis.

¹⁰ Marginal effects are calculated on the basis of average characteristics and account is taken of the nature of 1/0 variables by evaluating the change in the probability of an individual moving to different labour market destinations when the variable takes the value 1 or 0.

¹¹ The sum of the marginal probabilities reported in each row of these tables should by definition equal zero. Where they do not this is due to the effects of rounding.

Steady State Distributions and Estimated Durations At or Below the NMW

Steady state labour market distributions, based on estimates of the transition matrix given by expression (8), are shown in Table 5¹². The first three rows in Table 5 show the steady state distributions for males and females combined and then for men and women separately; the figures in parentheses show steady state labour market distributions derived from the alternative estimator of the transition matrix (i.e., found from using expression (6) to estimate each ω_{ij}). Steady state distributions derived from using expressions (6) and (8) to estimate the transition matrix are included in Table 5 in order to allow a comparison to be made between the distributions produced by these different methods. As is clear from distributions produced separately for men and women both methods produce virtually identical results, which implies that using expression (8) to estimate the transition matrix is as good as using expression (6) to track movements across the four labour market states identified in the analysis.

The steady state distributions shown in Table 5 show that the proportion of the population at risk of being paid at or below the NMW is higher for women (5.6 per cent of all women aged 22-59 compared to 1.8 per cent of men aged 22-64), the young (4.3 per cent of all 22-34 year olds but only 1.9 per cent of those aged 55-64), and for those with no qualifications (5.8 per cent of all individuals aged 22 to 64 with no qualifications compared to 1.5 per cent of individuals aged 22 to 64 with higher qualifications). In terms of employment related characteristics Table 5 also indicates that the incidence of being paid at or below the NMW is higher for part-time workers

¹² The steady state distributions reported for workforce characteristics are found by taking individuals in employment at time t-1 that have a particular characteristic and then simulating the transition rates found from estimates of expression (8). For characteristics common to all four labour market states, transition rates are still found from estimates of (8) but in this case the predictions from each multinomial logit model are based on the sample of individuals found in each state at time t-1.

(8.8 per cent for part time workers compared to 2.5 per cent for full time workers); for individuals employed in small establishments (6.9 per cent for individuals employed in small firms compared to 3.1 per cent for individuals employed in larger firms); for private sector workers (5.2 per cent for private sector workers compared to 2.8 per cent in the public sector), for those with shorter job tenure (6.1 per cent for tenure of less than a year, 5.2 per cent for those with tenure between 1 and five years, and 3.3 per cent for those with job tenure exceeding five years); for workers employed in Distribution, Hotels and Restaurants (8.9 per cent) and for those employed on temporary contracts (4.8 per cent of workers on temporary contracts).

Similarly the incidence of those paid above the NMW is higher for individuals with qualifications (81 per cent of individuals with higher qualifications are paid above the NMW compared to only 35 per cent of those with no qualifications); for those living in the South-East and East-Anglia (just over 71 per cent of workers in these two regions can be expected to be re paid above the NMW); for those without a work limiting disability (75 per cent for those without a disability compared to 24 per cent of individuals with a disability); for those working in larger firms or the public sector (82 per cent and 84 per cent respectively); and for those on permanent contracts and who have been with their current employer longer.

Although the discussion has focused mainly on the position of workers paid at or below the NMW it is also worth noting that the steady state distributions for both unemployment and inactivity are sensible and mostly conform to prior expectations. The steady state values for unemployment and inactivity are 3 per cent and 28 per cent respectively for the full sample, and both unemployment and inactivity incidences tend

to vary in line with the usual suspects. Thus unemployment incidences are higher for men, for individuals with no qualifications, singles, and the young; while inactivity rates tend to be higher among the least qualified, the old, among individuals with work limiting disabilities, and for individuals living in the North, and Wales¹³.

Finally, exit probabilities calculated on the basis of the information provided by the transition matrices are used to estimate the expected duration of employment at or below the NMW for different types of individuals using expression (9). The results of this exercise are reported in Tables 6 and 7; Table 6 for personal characteristics and Table 7 for employment-related characteristics. For the full sample the probability of exiting employment at or below the NMW is estimated to be 0.67, which implies an average expected duration of about 1.48 years on pay at or below the NMW. Exit probabilities from the NMW are estimated to be higher for young workers aged 22-34 (0.74) and lower for individuals with low qualifications (0.60). So the time a young worker can expect to be employed at or below the NMW is shorter than that expected by a worker with low qualifications. Similarly Table 6 indicates that the time an individual can expect to remain in a job paid at or below the NMW is higher for women than for men, for workers in the North compared to workers in other regions, and for those with a work limiting disability.

Turning to employment related characteristics reported in Table 7, expected durations at or below the NMW are longer for part-time employees (1.55 years for part time workers compared to 1.38 years for full time workers); for those employed in Agriculture and Fishing (1.65 years); for workers in small firms (1.59 years for workers

¹³ However, the inactivity rate estimated for those aged 55-64 does seem to be implausibly large and should therefore be treated with caution.

in small firms compared to 1.36 years for workers in larger firms); and for those employed in the private sector (1.51 years for private sector workers compared to 1.39 years for public sector workers). However, while Tables 6 and 7 both indicate that exit probabilities and expected durations at or below the NMW can vary for different types of workers, the differences reported are not that dramatic – e.g. on the basis of expected duration measure the difference between the highest and lowest values is only 0.35 of a year (i.e., the difference between 1.66 years for workers with no qualifications and 1.31 years for workers employed in Transport and Communications) .As suggested in Table 2, therefore, for a majority of workers the duration of employment on or below the minimum wage is not long-term, and as a result they do not appear to be permanently trapped in NMW employment.

CONCLUSION

The evidence reported in this paper suggests that the incidence and duration of time at or below the NMW vary for different types of individuals. However, the evidence on low pay dynamics revealed by the analysis of the LFS is consistent with that found in the United States in so far as minimum wage jobs are of relatively short-duration Most important from the policy point of view is that a substantial number of those paid at or below the minimum wage move after a short period into higher paid employment and for over half of them the upward adjustment in pay is in excess of 10% above the minimum. As our estimates also suggest that only about 3.8 per cent of the eligible adult workforce in the UK are likely to be affected by the legislation these results seem to offer a plausible explanation of why most work done on the NMW in the UK to date has found it to have had only a benign effect on employment outcomes. In this context, therefore, future work might consider how future up ratings made to the NMW that

have the effect of increasing its bite and severity are likely to change these positive conclusions.

Table 1: UK National Minimum Wage Rates (£ per hour)

	Adult Rate	Youth Rate
April 1999	3.60	3.00
June 2000	3.60	3.20
October 2000	3.70	3.20
October 2001	4.10	3.50
October 2002	4.20	3.60
October 2003	4.50	3.80
October 2004	4.85	4.10
October 2005	5.05	4.25

Table 2: Transition Rates: LFS Estimates Spring 1999 to Autumn 2003, Derived Hourly Earnings – Adults Only

<i>Males and Females Combined</i>				
	Destination			
Origin	At or Below NMW	Above NMW	Unemployed	Inactive
At or Below NMW	0.323	0.556	0.029	0.092
Above NMW	0.031	0.963	0.013	0.030
Unemployed	0.051	0.318	0.374	0.257
Inactive	0.014	0.059	0.036	0.891
<i>Males Only</i>				
	Destination			
Origin	At or Below NMW	Above NMW	Unemployed	Inactive
At or Below NMW	0.263	0.608	0.054	0.075
Above NMW	0.015	0.948	0.015	0.022
Unemployed	0.033	0.305	0.455	0.208
Inactive	0.005	0.037	0.040	0.918
<i>Females Only</i>				
	Destination			
Origin	At or Below NMW	Above NMW	Unemployed	Inactive
At or Below NMW	0.340	0.541	0.022	0.097
Above NMW	0.047	0.905	0.010	0.037
Unemployed	0.073	0.335	0.273	0.319
Inactive	0.018	0.071	0.034	0.877

Table 3: LFS Estimates Spring 1999 to Autumn 2003 According to Degree of Upward Mobility. Origin at or Below the NMW and Destination Above the NMW

	Below + 5%	Above + 5%
All	13.11	86.9
Men	10.4	89.6
Women	14.1	85.9
	Below +10%	Above +10%
All	24.4	75.6
Men	17.1	82.9
Women	27.2	72.8
	Below +20%	Above +20%
All	41.4	58.6
Men	32.8	67.2
Women	44.6	55.4
	Below +30%	Above +30%
All	56.4	43.6
Men	45.9	54.1
Women	60.3	39.7
	Below +50%	Above +50%
All	71.9	28.1
Men	62.8	37.2
Women	75.3	24.7

Table 4a: Origin At or Below the NMW – Marginal Effects

Origin At or Below the NMW	Destination			
	At or Below NMW	Above the NMW	Unemployed	Inactive
	Marginal Effect	Marginal Effect	Marginal Effect	Marginal Effect
Male	-0.037	0.061**	0.013*	-0.036***
Higher Education	-0.083***	0.124***	-0.014***	-0.027**
A-level	-0.073***	0.069**	-0.003	0.007
O-Level	-0.062***	0.078***	-0.002	-0.014
Other Qualifications	-0.061***	0.070***	0.003	-0.012
Married	-0.024	0.018	0.009*	-0.003
Widowed/Separated/Divorced	-0.017	0.002	0.025*	-0.009
Mortgage	-0.062**	0.054**	0.001	0.007
Public Rented	-0.002	-0.017	0.004	0.016
Private Rented and Other	0.043	-0.076*	-0.007	0.039
Disability	0.025	-0.164***	0.011	0.129***
Dependent Children	0.005	-0.015	0.001	0.009*
Child Under 4	-0.035	-0.032	-0.001	0.069***
Part Time	0.049**	-0.061***	-0.004	0.016
Small Firm	0.102***	-0.121***	0.009**	0.010
Private Sector	0.074***	-0.081***	0.000	0.007
Agriculture and Fishing	-0.017	0.050	-0.004	-0.029
Manufacturing/Energy/Water	-0.038	-0.008	0.028	0.018
Construction	-0.056	0.060	0.014	-0.018
Distribution/Hotels/Restaurants	-0.036	0.025	0.005	0.006
Transport and Communications	-0.097**	0.119**	-0.002	-0.019
Banking, Finance and Insurance	-0.082**	0.080**	0.000	0.001
Public Administration, Education and Health	0.000	0.008	-0.003	-0.005
Non White	0.075	-0.080	0.014	-0.009
Temporary Contract	-0.050*	-0.054	0.010	0.094***
Tenure	0.000	0.000	0.000**	0.000
2000/01	-0.014	0.035	-0.006	-0.016
2001/02	0.046**	-0.039*	0.004	-0.011
2002/03	0.017	-0.006	0.001	-0.012
Log likelihood	-3203.498			
N	3425			
LR χ^2 (126)	486.74 (0.000)			

Notes: *, **, *** indicate significance of marginal effect at the 10%, 5% and 1% level respectively. The specification from which these marginal effects were derived also included a constant, regional dummies and a quadratic in age. p-value for the χ^2 test in parenthesis.

Table 4b: Origin Above the NMW – Marginal Effects

Origin Above the NMW	Destination			
	At or Below NMW	Above the NMW	Unemployed	Inactive
	Marginal Effect	Marginal Effect	Marginal Effect	Marginal Effect
Male	-0.009***	0.023***	0.001	-0.014***
Higher Education	-0.021***	0.020***	0.001	-0.001
A-level	-0.011***	0.013***	-0.001	-0.001
O-Level	-0.009***	0.011***	0.000	-0.001
Other Qualifications	-0.006***	0.007***	0.000	-0.001
Married	0.002*	-0.003	-0.002**	0.003*
Widowed/Separated/Divorced	-0.001	0.000	-0.001	0.001
Mortgage	-0.005***	0.018***	-0.004***	-0.009***
Public Rented	0.007***	-0.017***	0.003*	0.007***
Private Rented and Other	-0.001	0.004	0.000	-0.004*
Disability	0.004**	-0.044***	0.005***	0.035***
Dependent Children	0.001***	-0.002**	0.000	0.001
Child Under 4	-0.005***	-0.014***	0.002	0.017***
Part Time	0.021***	-0.037***	-0.001	0.017***
Small Firm	0.008***	-0.011***	0.001	0.002***
Private Sector	0.012***	-0.027***	0.006***	0.008***
Agriculture and Fishing	-0.006**	0.007	0.002	-0.004
Manufacturing/Energy/Water	-0.006***	-0.006	0.003	0.009**
Construction	-0.009***	0.006	0.003	0.000
Distribution/Hotels/Restaurants	0.002	-0.006	0.001	0.003
Transport and Communications	-0.006***	0.004	-0.002	0.003
Banking, Finance and Insurance	-0.009***	0.004	0.002	0.003
Public Administration, Education and Health	0.000	0.002	-0.003	0.002
Non White	0.003	-0.017***	0.009***	0.004
Temporary Contract	0.006***	-0.048***	0.023***	0.020***
Tenure	0.000***	0.000***	-0.000***	0.000***
2000/01	0.000	-0.001	-0.001	0.002
2001/02	0.003***	-0.007***	0.002	0.002
2002/03	0.002	-0.005**	0.002*	0.001
Log likelihood	-17271.998			
N	57596			
LR χ^2 (126)	4578.820 (0.000)			

Notes: *, **, *** indicate significance of marginal effect at the 10%, 5% and 1% level respectively. The specification from which these marginal effects were derived also included a constant, regional dummies and a quadratic in age. p-value for the χ^2 test in parenthesis.

Table 4c: Origin Unemployed – Marginal Effects

Origin Unemployed	Destination			
	At or Below NMW	Above the NMW	Unemployed	Inactive
	Marginal Effect	Marginal Effect	Marginal Effect	Marginal Effect
Male	-0.030***	0.009	0.164***	-0.143***
Higher Education	-0.021**	0.245***	-0.135***	-0.089***
A-level	-0.012	0.137***	-0.065**	-0.061***
O-Level	-0.001	0.115***	-0.077***	-0.037
Other Qualifications	0.016	0.099***	-0.070***	-0.046*
Married	0.020**	0.123***	-0.206***	0.063***
Widowed/Separated/Divorced	0.021	0.065**	-0.087***	0.001
Mortgage	-0.013	0.061**	-0.049*	0.001
Public Rented	-0.019*	-0.111***	0.078***	0.051**
Private Rented and Other	-0.006	-0.075**	0.057	0.025
Disability	0.003	-0.082***	-0.029	0.109***
Dependent Children	0.000	-0.016	0.005	0.012
Child Under 4	-0.013	-0.008	-0.044	0.064**
Non White	-0.019*	-0.094***	0.129***	-0.016
2000/01	0.000	0.024	-0.029	0.005
2001/02	0.003	0.041*	-0.059**	0.015
2002/03	0.025*	0.025	-0.062**	0.012
Log likelihood	-3594.721			
N	3197			
LR χ^2 (90)	693.440 (0.000)			

Notes: *, **, *** indicate significance of marginal effect at the 10%, 5% and 1% level respectively. The specification from which these marginal effects were derived also included a constant, regional dummies and a quadratic in age. p-value for the χ^2 test in parenthesis.

Table 4d: Origin Inactive – Marginal Effects

Origin Inactive	Destination			
	At or Below NMW	Above the NMW	Unemployed	Inactive
	Marginal Effect	Marginal Effect	Marginal Effect	Marginal Effect
Male	-0.004***	0.011***	0.023***	-0.030***
Higher Education	-0.001	0.044***	0.017***	-0.061***
A-level	0.000	0.030***	0.010***	-0.040***
O-Level	0.002	0.024***	0.011***	-0.037***
Other Qualifications	0.005**	0.020***	0.011***	-0.035***
Married	0.000	0.009***	-0.014***	0.005
Widowed/Separated/Divorced	0.000	0.017***	0.003	-0.021***
Mortgage	0.003	0.009***	0.010***	-0.021***
Public Rented	-0.001	-0.012***	0.020***	-0.007
Private Rented and Other	0.000	-0.007**	0.023***	-0.016**
Disability	-0.008***	-0.040***	-0.023***	0.070***
Dependent Children	0.000	-0.002**	-0.002*	0.004***
Child Under 4	-0.002**	-0.013***	-0.011***	0.026***
Non White	-0.006***	-0.013***	0.007*	0.012**
2000/01	-0.001	0.000	-0.001	0.002
2001/02	0.004***	-0.005**	-0.001	0.002
2002/03	0.001	-0.004	0.000	0.003
Log likelihood	-9325.169			
N	23500			
LR χ^2 (90)	2440.800 (0.000)			

Notes: *, **, *** indicate significance of marginal effect at the 10%, 5% and 1% level respectively. The specification from which these marginal effects were derived also included a constant, regional dummies and a quadratic in age. p-value for the χ^2 test in parenthesis.

Table 5: Steady State Labour Market Distributions LFS Estimates- Adults Only

Group	At or Below the NMW	Above the NMW	Unemployment	Inactivity
All	0.038 (0.038)	0.649 (0.648)	0.031 (0.031)	0.281 (0.282)
Male	0.018 (0.018)	0.650 (0.651)	0.040 (0.041)	0.292 (0.291)
Female	0.056 (0.056)	0.624 (0.622)	0.025 (0.025)	0.296 (0.297)
Highest qualification	0.015	0.809	0.023	0.153
Intermediate qualification	0.038	0.700	0.029	0.232
Low qualification	0.058	0.350	0.042	0.550
Single	0.035	0.697	0.050	0.218
Married	0.038	0.642	0.022	0.299
Widowed/Separated/Divorced	0.044	0.606	0.043	0.307
Northern	0.052	0.597	0.031	0.319
Yorkshire/Humberside	0.045	0.612	0.035	0.308
East Midlands	0.049	0.677	0.031	0.243
East Anglia	0.041	0.714	0.024	0.222
London	0.017	0.655	0.043	0.284
South East	0.034	0.714	0.025	0.227
South West	0.044	0.685	0.022	0.249
West Midlands	0.044	0.641	0.033	0.282
North West	0.037	0.632	0.033	0.298
Wales	0.042	0.617	0.022	0.319
Scotland	0.035	0.632	0.033	0.300
Age 22-34	0.043	0.741	0.036	0.181
Age 35-44	0.042	0.783	0.027	0.149
Age 45-54	0.035	0.594	0.028	0.342
Age 55-retirement	0.019	0.229	0.026	0.726
Disability	0.024	0.243	0.037	0.695
No Disability	0.041	0.751	0.029	0.179
<i>Employment Related Characteristics</i>				
Full Time	0.025	0.846	0.027	0.102
Part Time	0.088	0.616	0.026	0.270
Agriculture and Fishing	0.053	0.759	0.041	0.146
Manufacturing/Energy/Water	0.029	0.786	0.038	0.147
Construction	0.023	0.835	0.036	0.106
Distribution/Hotels/Restaurants	0.089	0.685	0.034	0.192
Transport and Communications	0.027	0.828	0.026	0.119
Banking, Finance and Insurance	0.028	0.818	0.030	0.123
Public Administration, Education and Health	0.037	0.818	0.017	0.129
Small Firm	0.069	0.719	0.032	0.180
Large firm	0.031	0.819	0.025	0.125
Private Sector	0.052	0.759	0.034	0.155
Public Sector	0.028	0.839	0.016	0.117

Temporary Contract	0.048	0.640	0.059	0.252
Permanent Contract	0.043	0.796	0.026	0.135
Tenure less than 1 year	0.061	0.745	0.040	0.153
Tenure between 1 and 5 years	0.052	0.788	0.031	0.129
Tenure more than 5 years	0.033	0.799	0.022	0.146

Notes:

1. Steady states given in parenthesis are based on the transition matrices reported in Table 2.
2. Highest qualification includes degree or other higher education, intermediate qualification include 'O' levels, 'A' levels and equivalent and no qualifications means no qualifications at all.

Table 6: Probability of Exit from the NMW and Average Expected Duration At or Below the NMW by Individual Characteristics

Group	Exit probability	Duration
All	0.67	1.48
Male	0.73	1.37
Female	0.66	1.52
Highest qualification	0.73	1.36
Intermediate qualification	0.70	1.42
Low qualification	0.60	1.66
Single	0.71	1.41
Married	0.67	1.48
Widowed/Separated/Divorced	0.63	1.59
Northern	0.60	1.65
Yorkshire/Humberside	0.69	1.46
East Midlands	0.65	1.53
East Anglia	0.69	1.45
London	0.79	1.27
South East	0.67	1.50
South West	0.66	1.51
West Midlands	0.65	1.54
North West	0.68	1.46
Wales	0.71	1.41
Scotland	0.70	1.43
Age 22-34	0.74	1.36
Age 35-44	0.66	1.51
Age 45-54	0.63	1.58
Age 55-retirement	0.65	1.55
Disability	0.65	1.53
No Disability	0.68	1.47

Note: Qualifications defined as in Table 8

Table 7: Probability of Exit and Average Expected Duration At or Below the NMW by Employment Related Characteristics – Adults Only

Group	Exit probability	Duration
Full Time	0.72	1.38
Part Time	0.65	1.55
Agriculture and Fishing	0.61	1.65
Manufacturing/Energy/Water	0.71	1.41
Construction	0.73	1.37
Distribution/Hotels/Restaurants	0.65	1.53
Transport and Communications	0.76	1.31
Banking, Finance and Insurance	0.73	1.38
Other Services	0.68	1.48
Small Firm	0.63	1.59
Large firm	0.73	1.36
Private Sector	0.66	1.51
Public Sector	0.72	1.39
Temporary Contract	0.75	1.33
Permanent Contract	0.67	1.50
Tenure less than 1 year	0.68	1.47
Tenure between 1 and 5 years	0.68	1.47
Tenure more than 5 years	0.66	1.50

Data Appendix

Table A1: LFS Variable definitions

Variable name	Definition
Male	1 if the individual is male; 0 otherwise
Higher Education	1 if the individual has a degree or other higher education qualification; 0 otherwise
A-level	1 if the individual has a 'A' level or equivalent education qualification; 0 otherwise
O-Level	1 if the individual has a 'O' level or equivalent education qualification; 0 otherwise
Other Qualifications	1 if the individual has an other qualification; 0 otherwise
No Qualifications	1 if the individual has no qualifications; 0 otherwise <i>(omitted category)</i>
Age	Individual's age in years
Northern	1 if the individuals lives in the Northern region; 0 otherwise
Yorkshire/Humberside	1 if the individuals lives in Yorkshire and Humberside; 0 otherwise
East Midlands	1 if the individuals lives in East Midlands; 0 otherwise
East Anglia	1 if the individuals lives in East Anglia; 0 otherwise
London	1 if the individuals lives in London; 0 otherwise
South East	1 if the individuals lives in the South East; 0 otherwise <i>(omitted category)</i>
South West	1 if the individuals lives in South West; 0 otherwise
West Midlands	1 if the individuals lives in the West Midlands; 0 otherwise
North West	1 if the individuals lives in North West; 0 otherwise
Wales	1 if the individuals lives in Wales; 0 otherwise
Scotland	1 if the individuals lives in Scotland; 0 otherwise
Northern Ireland	1 if the individual lives in Northern Ireland; 0 otherwise
Single	1 if the individual is single and has never been married; 0 otherwise <i>(omitted category)</i>
Married	1 if the individual is married; 0 otherwise
Widowed/Separated/Divorced	1 if the individual is separated, divorced or widowed; 0 otherwise
Own Outright	1 if the individuals home is owned outright; 0 otherwise <i>(omitted category)</i>
Mortgage	1 if the individuals home is owned with a mortgage; 0 otherwise
Public Rented	1 if the individuals home is rented or rent free from local authority, Scottish homes, new town development or housing association, co-op, trust; 0 otherwise
Private Rented and Other	1 if the individuals home is part rent, squatting or rented or rent free from employing organization,

	another organization, relative, individual employer or other private landlord; 0 otherwise
Dependent Children	number of dependent children under 19 in family and person is head/spouse
Child Under 4	1 if the individual has a dependent child in family aged under 4 and person is head/spouse; 0 otherwise
Disability	1 if the individual has a work limiting disability; 0 otherwise
Non-White	1 if the individual is non-white; 0 otherwise
1999/00	1 if individual surveyed between 1999-2000; 0 otherwise (<i>omitted category</i>)
2000/01	1 if individual surveyed between 2000-2001; 0 otherwise
2001/02	1 if individual surveyed between 2001-2002; 0 otherwise
2002/03	1 if individual surveyed between 2002-2003; 0 otherwise
Employed	
Part-Time	1 if the individual is employed part time; 0 otherwise
Agriculture and Fishing	1 if the individual is employed in agriculture and fishing; 0 otherwise
Manufacturing/Energy/Water	1 if the individual is employed in energy and water or manufacturing; 0 otherwise
Construction	1 if the individual is employed in construction; 0 otherwise
Distribution/Hotels/Restaurants	1 if the individual is employed in distribution, hotels and restaurants; 0 otherwise
Transport and Communications	1 if the individual is employed in transport and communication; 0 otherwise
Banking, Finance and Insurance	1 if the individual is employed in banking, finance and insurance; 0 otherwise
Public Administration, Education and Health	1 if the individual is employed in public administration, education or health; 0 otherwise
Other Services	1 if the individual is employed in other services; 0 otherwise (<i>omitted category</i>)
Small Firm	1 if the individual is employed in an organisation with less than 25 employees; 0 otherwise
Private Sector	1 if the individual is employed in the private sector; 0 otherwise
Temporary Contract	1 if the individual is employed in a non permanent position; 0 otherwise
Tenure	length of time continuously employed in months

Table A2: LFS Summary Statistics: Means by Labour Market Status

	At or below NMW	Above NMW	Unemployed	Inactive
Male	0.24	0.50	0.56	0.35
Higher Education	0.10	0.31	0.16	0.13
A-level	0.18	0.23	0.19	0.18
O-Level	0.27	0.23	0.23	0.19
Other Qualifications	0.19	0.12	0.17	0.15
Age	39.08	40.68	38.14	44.01
Northern	0.08	0.05	0.08	0.07
Yorkshire/Humberside	0.11	0.09	0.09	0.09
East Midlands	0.09	0.07	0.06	0.07
East Anglia	0.03	0.03	0.03	0.03
London	0.04	0.08	0.12	0.11
South West	0.11	0.10	0.07	0.07
West Midlands	0.10	0.09	0.09	0.08
North West	0.09	0.09	0.10	0.11
Wales	0.05	0.05	0.05	0.06
Scotland	0.10	0.10	0.12	0.10
Northern Ireland	0.03	0.02	0.04	0.05
Married	0.59	0.66	0.40	0.60
Widowed/Separated/Divorced	0.14	0.12	0.16	0.17
Mortgage	0.54	0.73	0.36	0.35
Public Rented	0.23	0.08	0.38	0.32
Private Rented	0.07	0.05	0.10	0.07
Dependent Children	0.14	0.08	0.22	0.46
Child Under 4	0.92	0.81	0.75	0.87
Disability	0.14	0.16	0.15	0.20
Non-White	0.04	0.03	0.10	0.08
2000/01	0.25	0.27	0.26	0.27
2001/02	0.25	0.27	0.26	0.28
2002/03	0.19	0.19	0.18	0.19
Part-Time	0.63	0.23		
Small Firm	0.57	0.29		
Private Sector	0.79	0.63		
Agriculture and Fishing	0.02	0.01		
Manufacturing/Energy/Water	0.10	0.20		
Construction	0.02	0.05		
Distribution/Hotels/Restaurants	0.39	0.15		
Transport and Communications	0.04	0.07		
Banking, Finance and Insurance	0.08	0.15		
Public Administration, Education and Health	0.26	0.33		
Temporary Contract	0.09	0.05		
Tenure	53.95	104.26		

Means relate to regression sample and refer to labour market status at wave 1.

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