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Gender Differences in Low Pay Labour Mobility

Euan Phimister*, Ioannis Theodossiou**

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ABSTRACT

This paper examines gender differences in the duration of low pay employment spells across types of exit to alternative states of the labour market namely high pay employment, unemployment and labour market inactivity, using data from the British Household Panel Survey. The methodology employed corrects for unobserved individual heterogeneity and uses a competing risk model of low pay to the above destinations to be estimated. The results show that there are statistically significant differences in the dynamics of low pay for men and women, particularly in terms of exits to higher pay and to the labour market inactivity. After controlling for different personal and job characteristics low pay durations are shorter on average for women, but with a lower probability of movement to a higher-paid job.

JEL Classification: J60. Keywords: low pay duration, competing risk.

*Centre for European Labour Market Research and Arkleton Centre for Rural Development Research, University of Aberdeen, Aberdeen University Business School, Edward Wright Building, Dunbar.
**Centre for European Labour Market Research, University of Aberdeen, Aberdeen University Business School, Edward Wright Building, Dunbar Aberdeen, AB24 3QY. We gratefully acknowledge the financial support of the Leverhulme Trust.

Corresponding Author
Ioannis Theodossiou, Department Of Economics, University of Aberdeen Business School, University of Aberdeen, Edward Wright Building, Aberdeen AB24 3QY. United Kingdom. Email theod@abdn.ac.uk. Fax 44 1224 272181.

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Low Pay Employment and Low Paid Labour Mobility

1. INTRODUCTION

The overall incidence of low pay in the UK is significantly higher for women than men with the chance of being low paid almost twice that for men (Metcalf, 1999). Previous empirical work also shows that being a woman significantly increases the probability of remaining in the low pay category (Gregory and Elias 1994a, b, Dex et. al. 1994, Sloane and Theodossiou (1998)).

Such differences are important for a number of reasons. Gender differentials in the time spent in low pay are of interest as low pay is seen as a more serious problem if prime-age workers become trapped in low paid jobs than if the experience of low pay is a transitory phenomenon (Layard et al, 1971). While the link between low pay and poverty is relatively weak, part of the present UK government strategy to combat poverty and inequality is to encourage individuals into work using policies to "make work pay". However, as Stewart and Swaffield (1998) argue the success of this strategy depends on whether the starting jobs do not simply offer semi-permanent low pay, or a high probability of exit out of employment. Therefore, gender differentials in time spent in low-paid jobs and the probability of progressing to a higher-paid job or other low-pay exit types could differentially affect the success of such policies for men and women in the UK. Finally, as upward wage mobility is lower for women, one might expect this to have a significant impact upon the gender earnings gap over time. Particular efficiency and equity concerns may also arise if the lower attachment to the labour force typically shown by women workers affects the time spent in low pay and their probability of gaining a higher paid job, e.g. if employers offer fewer training opportunities to women as a result.

One obvious source of gender differences is simply that the typical personal and job characteristics of female workers increase the probability that they are low paid, e.g. greater incidence of lone parents, part-time working, and employment concentrated in small firms and the service sector. While previous evidence suggests the existence of a gender effect even after controlling for such characteristics, there has been little further exploration as to the source or implications of such differences (Gregory and Elias 1994a, b, Dex et. al. 1994, Sloane and Theodossiou (1998)). Further, although the reduced low pay exit probability for women is well recognized, most work has concentrated primarily on exits to high pay. In contrast, there has been little research which explores the extent of gender differences in terms both of low pay duration and also where individuals move to at the end of a low pay spell, i.e. distinguishing exits to high pay from other

possible destinations such as unemployment or to labour market inactivity and in low pay duration. Low pay duration and the type of exit from low pay are both potentially important sources of gender differences. For example, as Royalty (1998) pointed out explanations of wage gap depend not just on differences in expected duration of a job but also on the destination state to which a worker exits. Thus, if job to job turnover is associated with pay increases while job to out of labour market or to unemployment turnover resulting from family responsibilities or redundancies, one would expect differences in patterns of exits from low pay to high pay, or low pay to unemployment or low pay to out of the labour market to be important in understanding gender differences in the low pay experience.

In the light of the above, this study focuses on the gender differences with respect to the low pay job ending in distinct destinations. In particular, the aim of this paper is to consider the extent to which personal and job characteristics affect the duration and exit type of low pay employment spells for men and women. Data on low pay employment spells from the British Household Panel Survey are used to estimate a competing risk model (Lancaster, 1990) of low pay exits to three possible destinations, namely, to a 'high pay', to unemployment and to out of the labour force. To identify gender differences separate models are estimated for men and women. Furthermore, as Heckman and Borjas (1990) and Lancaster (1979) pointed out, failure to account for effects of unobserved personal characteristics which decrease (increase) the re-employment probabilities may also bias the results in favour of negative (positive) duration dependence. This paper circumvents the problems associated with individual heterogeneity by allowing the unobserved heterogeneity to be incorporated by assuming a proportional hazard model with Gaussian Mixing.

2. LOW PAY; A BRIEF LITERATURE REVIEW

The recent literature shows that in the U.K. upward earnings mobility is rather limited. Thus, Gosling et al. (1997) found that relatively few people from the bottom of the earnings distribution in the UK escape into the top half. In fact, Stewart and Swaffield (1998 a and b) showed that the probability of exiting low pay is around twice as high in the first year as in the second, if individuals remained low paid over the first year. Dickens (1997) found that some 48% of individuals in the bottom decile of the earnings distribution remain there one year later. Furthermore, in line with other studies many of the movers do not exit low pay employment for better-paid jobs but they leave employment altogether. This is in line with a number of studies such as OECD (1996) and Sloane and Theodossiou (1998) which suggest that large majority of those leaving low-paid employment leave employment altogether rather than moving into other employment states. Thus, in general, movement out of low pay is more likely to mean mobility out

of employment rather than movement up the earnings distribution. Similarly, Gregory and Jukes (1998) showed that the market prospects of low paid individuals are bleak. Their earnings are low, they bear a high risk of ending the low pay employment spell by entering into joblessness and when this occurs they remain out of work on average longer that their higher paid counterparts. When the unemployment spell ends, they are again employed in a low paid job, though the effect of the length of their prior unemployment on their current earnings appears to be weak. Thus, the combination of the fact that low-wage workers are more likely to move out of work and that those out of work are more likely to enter low-wage jobs produces a strong relationship between low pay employment and joblessness.

This emphasis that any study of low pay dynamics must allow for both earnings mobility during a period of time and the unemployment or joblessness propensity of the individual worker. This is particularly important in this context as gender differences in pay, labour market attachment and job turnover are well documented (Altonji and Blank, 1999). For example, labour market experience interruptions caused by women's role as the individual with the primary responsibility for childrearing and the status of wives as secondary earners are in the household are considered in the literature as important explanations of the wage gap. Loss of human capital (Mincer and Polachek, 1974) and wage gains predicted by job matching (Viscusi, 1980) due to discontinuous labour force participation suggest that the likelihood of an exit from low pay to labour market inactivity or unemployment is likely to differ for males and females.

This also suggests that any factor affecting wage growth, job turnover and employment status change is also likely to impact on the time spent in low pay and the ultimate exit destination. Hence, unsurprisingly, previous research has shown that in additional to gender, factors such as human capital, job tenure, and experience, firm size, trade union status, part-time working, are all important in the mobility of low-paid workers (Gregory and Elias, 1994; Gosling et al., 1997, Sloane and Theodossiou, 1998, Stewart and Swaffield 1998a). Given the observed gender differences in wages and labour market behaviour, it is obviously also important to consider whether the impact of such factors on low pay duration and exit type is different for men and women.

There is also evidence that workers prospects of moving up the earnings ladder worsen as the duration of a low-paid employment spell lengthens, i.e. the "scarring effect" of low pay. McKnight (1998), using British event history data, estimated the hazard rate of low wage employment spell termination and showed that for individuals in low paid employment the number of spells in low-wage employment, and the number and duration of spells in unemployment reduce the likelihood of exiting a spell of low-paid employment. In effect, this implies that being in low

pay employment itself traps people in low pay. Similar conclusions were reached by Stewart and Swaffield (1998), who argued that those who have already been low paid for more than one period also find it difficult to move up the earnings ladder.

Hence, while the impacts of factors such as human capital and job characteristics may be an important source of gender differences in low pay mobility, there may also be differences in scarring or "duration dependence effects". For example, these might arise if the more interrupted nature of female job histories means employers are less likely to use the observation that an individual female worker has been in low pay employment as a signal of worker quality.

The above discussion provides the general basis for the empirical work which follows. First, the evidence on the gender differences in wages, job turnover and labour market attachment, and the importance of the dynamics of earnings and employment status in low pay mobility, emphasise the need to model both low pay duration and type of exit. Second, previous research suggests a range of factors which are likely to affect the dynamics of low pay and whether these differ by gender should be investigated. Finally, there may be reasons to suspect that any scarring effects or duration dependence in low pay differs for men and women and that this possibility should be taken into account.

3. THE DATA

The data were drawn from the first eight waves (1991-1998) of the British Household Panel Survey (BHPS). The BHPS is a nationally representative sample of approximately 5,500 households recruited in 1991. In principle, each individual over the age of 16 within the household is interviewed each year. Where a respondent's household has moved, attempts are made to trace them to their new address. Equally, if a respondent household withdraws from the survey, attempts are made to replace them with another household. Each year a number of core questionnaires are used, and include detailed information on income, labour market behaviour, household composition, education, etc.

At each interview, respondents are asked detailed information on employment since the last interview. From this data we construct a complete sequence of labour market spells recorded to the nearest calendar month for all individuals with at least three consecutive interviews. A "spell" is either a job, a period of unemployment, or a period out of the labour market, or a period of self-employment. Inconsistencies in this data arise primarily from differences between what individual recall about their employment status at the previous interview and what was actually recorded at the previous interview. Following Upward (1999) these problems are reconciled by applying the

principle that information recorded closest to any particular event is the most reliable. Information collected at each interview on personal and job characteristics, hours worked and earnings is also used. From this, hourly wages can be imputed (Sloane and Theodossiou 1996). However, it is not possible to impute wages for jobs that start and end between consecutive interviews, so these spells are dropped from the analysis. As a result, the analysis is likely to underestimate the extent of low-paid jobs of very short duration. However, arguably this improves upon previous studies of low pay that assume that individuals spend the entire time between interviews either in or out of low pay. Individuals where data was missing on hours worked, earnings or other variables used in the analysis were also dropped from the sample. Finally, as the main focus of interest in the paper is on the dynamics of those within employment, individuals whose low pay spell ended in self-employment were dropped from the sample.

The Measurement of Low Pay and Summary Statistics

Low pay may be defined in absolute or relative terms, the former being more appropriate if the major concern is with poverty and the latter if it is with equity. Using a measure such as the lowest decile, quintile or third decile has the effect of accounting for a fixed percentage of all workers. The alternative of defining low pay as a percentage of median earnings allows for variations in the proportion defined as low paid over time and therefore is more suitable for answering the question of whether the problem of low paid is becoming less or more widespread. While the thresholds most commonly used are defined with reference to the median wage, the actual value chosen varies considerably, ranging from the bottom decile to two-thirds the median wage (Gosling et al, 1997; Stewart and Swaffield ,1998; Sloane and Theodossiou, 1996). This study adopts what might be considered the upper bound is used, namely, the bottom third of the earnings distribution of the BHPS sample in each year

Using these definitions provided a basic sample of 2494 low-paid men and 3290 low-paid women. A useful way to describe these low-paid jobs is the survivor function, *S(j)*. This is the probability that a low-paid job lasts beyond month *j*, estimated by counting the number of jobs which end on or before *j* compared to the total number of jobs, where *j* indicates the elapsed number of months that an individual has been in a low-paid job. The survivor function is more informative than a comparison of the average length of spells for men and women since it summarises the whole distribution: one can choose any month *j* and observe whether a larger proportion of low-paid jobs for men have ended compared to women. Figure 1 shows the estimates of *S(j)* for males and

females separately.[1] It shows that the proportion of low-paid jobs remaining at time *j* is always smaller for men suggesting that low-paid jobs end more quickly for men compared to females. This evidence is supported statistically with the equality of the survival functions rejected at 1% significance using the log rank test (StataCorp, 2001).

Table 1 reports sample means for certain key characteristics of the low pay spells for both the male and female samples. The low pay spells are also distinguished by the three exits types, namely, exits to a higher paid job, unemployment and out of the labour force. Consistent with the survivor function evidence, the overall mean duration and the proportion of censored spells is higher for the female sample, with the conditional mean duration times for exits to unemployment and out of the labour force also somewhat higher. Differences in a number of the characteristics of the male and female samples are also evident from Table 1. A higher proportion of women in low pay spells work in the public sector, in small firms, as part-time, in the service sectors, and in skilled occupations. Although there are few differences in terms of education or training, a higher proportion of low paid females have a spouse who works, have more children, and are more likely to be in the middle to older age groups

4. MODELLING EARNINGS MOBILITY

The methodology used in this study in order to study the probability of exit from a low pay employment spell by stated type of exit is to estimate a discrete time competing risk hazard model with three exit types, namely, to high pay employment, unemployment, and out of the labour force. However, Heckman (1981) has pointed out that any estimates regarding the effects of individual characteristics on the exit hazard are likely to be seriously biased when unobserved differences or individual heterogeneity is not taken into account. Thus, in this model the unobserved heterogeneity is incorporated by assuming a proportional hazard model with Gaussian Mixing (Andrews, Bradley and Scott, 2002; Andrews, Bradley and Upward, 2001; Stewart, 1996; Lancaster, 1990).

Assuming that each person exits low pay in an interval $[j-1, j)$ to one of three states *r=1,..3*, the *three* latent variables represent the potential time in low pay with an exit of type *r, i.e.* T_r, *r=1,..,3*. Low pay duration is then the random variable *T* where $T = \min(T_1, T_2, T_3)$[2]. For any

[1] Strictly, we calculate the non-parametric maximum-likelihood Kaplan-Meier estimate of the survivor function (Kaplan & Meier 1958).

[2] Censored exits are treated in a symmetric manner in this framework.

period j , the hazard to state r, h_{rj} are defined as the probability of an exit to state r during period j given that the low pay duration lasted to j-1. It can be shown that in each period j, the overall low pay exit hazard is the sum of the hazards to all possible states , i.e. $h_j = \sum_{r=1}^{3} h_{rj}$. Similarly, the survivor function is defined as $S_j = \prod_{s=1}^{j} \left(1 - \sum_{r=1}^{3} h_{rj}\right)$. The influence of observed covariates and unobserved heterogeneity are captured by modelling each exit type using a proportional hazard model with Gaussian mixing, i.e.

$$(1) \qquad h_{rj}(\mathbf{x}_i', v_i) = \left(h_{rj0}^m \left(1 - d_f\right) + d_f h_{rj0}^f\right) v_i \exp\left(\left(1 - d_f\right)\mathbf{x}_i'\boldsymbol{\beta}_r^m + d_f \mathbf{x}_i'\boldsymbol{\beta}_r^f\right)$$

where h_{rj0}^m, h_{rj0}^f are the male and female baseline hazards for the exit type r, v_i is a random variable capturing unobserved heterogeneity such that $u = \log(v)$ is normally distributed, $\mathbf{x}_i$ is the vector of covariates assumed to influence the exit hazard. The dummy d_f equals one for females and hence both the baseline hazards and the impact of each characteristic are allowed to vary across the male and female samples. The vector of covariates $\mathbf{x}_i$ contains the individual and job characteristics summarized in Table 1 namely, education, age, gender, industry etc plus regional and time dummy variables. Hence both sources of potential gender differences in low pay dynamics discussed in section 2 are allowed for. If low pay duration dependence differs for men and women then this should be captured by differences in the underlying baseline hazards. If gender differences in factors affecting wages, job turnover and labour market attachment induce differences in low pay dynamics this should be captured via differences in the impact of the characteristics on the baseline hazard.

As the overall survival function depends on all the transition intensities or exit hazards, the estimated coefficients, $\boldsymbol{\beta}_r^k$, provides no information on such effects. To compute these effects, the probability of exit via type r, Π_r and the expected low pay duration given an exit of type r, E_r are required. These can be shown to be:

$$(2) \qquad \Pi_r = \sum_{j=1}^{\infty} h_{rj} S_{j-1}$$

[3] Andrews, Bradley and Upward, 2001; Stewart, 1996; Lancaster, 1990

(3) $$E_r = \frac{1}{\Pi_r} \sum_{j=1}^{\infty} j h_{rj} S_{j-1},$$

(Andrews, Bradley and Upward, 2001; Thomas, 1996; Lancaster, 1990) with overall expected low pay duration being $\sum_{r=1}^{3} P_r E_r$. Using the above formulae, the effect of any covariate on exit probabilities, conditional expected waiting times by exit type and unconditional expected waiting time can be approximated numerically. In addition, the conditional exit probabilities namely probability of exiting to state *r* conditional on exiting during the interval j can be calculated as follows:

(4) $$p_{rj} = \frac{h_{rj}}{\sum_r h_{rj}}$$

In line with Lindeboom and Van den Berg (1994) it is assumed that the unobserved heterogeneity is independent across exit types and therefore the impact of the covariates on the transition intensities can be estimated separately for each exit type. Moreover, this version of the model may be estimated using standard software packages, if the data is reorganised into sequential binary response form (Prentice and Gloeckler, 1978; Han and Hausman 1990). Thus, for every low pay spell, an observation is generated for the each month where the indicator variable y_{ij} equals one if an exit of the type under consideration occurs during the month and zero otherwise. Estimation of the model is then equivalent to the estimation of the simple binary choice model with the complementary log-log link and normally distributed unobserved heterogeneity[4]. Each period *j* represents a month and so the method allows the estimation of nonparametric baseline hazard functions (for men and women) by using appropriately defined time varying dummy variables. However, to identify a month specific hazard rate requires low pay exit to each destination in each month. Because there are usually fewer exits at later months, this is not possible for all months so a series of grouped dummy variables is defined for longer intervals. Consequently, the baseline hazards for men and women are allowed to vary across 17 different intervals, namely, one for each of the first 12 months of a low pay spell, then constant within six month intervals until month 24 of the spell, then for twelve month intervals until month 72, and constant thereafter.

5. ECONOMETRIC RESULTS

As described above, the competing risk model is estimated separately for each exit type. Table 2 presents estimates of $\boldsymbol{\beta}_r^k$ for each exit type and by gender. All models also include separate dummies to allow the baseline hazard to vary by gender and a common set of regional and time

[4] Details can be found in StataCorp, 2001.

dummies. A more general specification which allowed the regional and time coefficients to vary across the two samples was also estimated. However, testing the equality of the regional and time coefficients (individually and jointly) suggested that the differences found were not statistically significant for any exit type. Therefore, for parsimony the reported estimated models imposed the restriction that the male and female coefficients were equal for these characteristics.

Overall, the regression evaluation measures provide some validation for the modelling approach taken. For all three regressions, the joint test of significance of the explanatory variables is rejected at less than 0.1% significance. The hypothesis that the baseline hazard rate (men or women) is constant is rejected at 1%, providing evidence that the baseline hazard rates vary with duration ("duration dependence") for both genders. The reported estimate of σ_u^2 provides an indication as to whether unobserved heterogeneity is important. The results suggest that unobserved heterogeneity is important for exits to out of the labour force only[5]. For exits to higher-paid jobs and unemployment, the hypothesis that this variance is zero and that therefore unobserved heterogeneity is not important cannot be rejected for any standard significance level.

The first panel of Table 2 reports the estimated values of $\boldsymbol{\beta}_r^m$ and $\boldsymbol{\beta}_r^f$, and their associated *t*-values. Hence, the estimates in column 1, 3 and 5 represent the impact of each variable on the conditional hazard for men for the three exit types, while columns 2, 4, and 6 report the estimates for women. A re-parameterised version of equation (1) was estimated for each exit type to allow the male-female differences in the individual coefficients to be tested. Statistically significant differences in these individual coefficients are denoted in the Table 2 with a star (10%) or two stars (5%).

Once observed characteristics are controlled for there are two potential sources of male-female differences allowed for in the statistical modelling. First, differences may occur in the underlying baseline hazards for men and women. Second, the impact of observed characteristics on the baseline hazards may differ. The presence of both these types of differences is straightforward to test given the estimated model structure. Testing for equality in the underlying baseline hazards in the estimated version of equation (1) is equivalent to testing for the equality of the coefficients on the dummy variables which capture the baseline effects. Similarly, testing for male-female differences in terms of the impact of the covariates are simply equivalent to tests of the form $H_o : \boldsymbol{\beta}_r^m = \boldsymbol{\beta}_r^f$.

The second panel of Table 2 reports the results of a series of Wald hypothesis tests. The first test is the hypothesis that both the baseline hazards and the coefficients on all the covariates are equal.

This hypothesis rejected at 10% for exits to high paid jobs (p-value-0.058), and at 1% for exits to unemployment and out of the labour force. The second hypothesis test considered is that the underlying baseline hazards are identical across the male and female samples. The evidence here does not suggest consistent differences between men and women, with the hypothesis of equality of baseline hazards rejected (at 10%) for exits to unemployment. Finally, the third hypothesis considered is that the joint impact of all the covariates is identical for men and women. The results show that significant differences in the impact of the covariates in the dynamics cannot be rejected for all three exit types. Hence, overall the results provide evidence that low pay dynamics differ for men and women.

In terms of the impact of the characteristics on the (conditional) baseline hazards, the estimated coefficients for both men and women are generally well determined with the expected signs. The results show that, line with Gregory and Elias (1994a, b), younger males have a significantly higher hazard of exiting a low paid job to a high pay one compared to their over 55 year old counterparts, but this is not the case for women where there are no significant age effects on the exit hazard. Indeed, for each of the individual age category variables, the gender difference in the impact of the age variable on the exit hazard to high pay is statistically significant.

In line with the human capital theory the results show that educational attainment enhances wage growth and thus relative to no qualifications increasing educational level increases the conditional hazard of escaping from a low paying job to a high paying one for both males and females. Yet, education does not appear to affect the hazard of exits to unemployment or out of the labour market for either sex. Importantly, though vocational training qualifications do not appear to have any significant effect on improving the upward earnings mobility, work-related training not only increases the conditional hazard of exit to a higher paid job but also reduces the conditional hazard of exit to unemployment - most probably due to the effect of specific training on the employer-employee match (Mincer (1962), Becker (1975). This effect is significantly stronger for females than for males, and one could therefore argue that specific training appears more effective in reducing the hazard of exit to unemployment for women compared to men.

Furthermore, the results show that low paid women employed in skilled occupations face a significantly lower conditional hazard of exiting low pay to out of the labour market relative to men. Yet, skilled male workers appear to face a lower risk of unemployment although, importantly, neither men nor women employed in low paying skilled jobs have any better chance of obtaining a high pay job than their unskilled counterparts. Finally, for men, a low pay manufacturing job decreases the exit hazard to unemployment. For women, the exit hazard to

[5] The null hypothesis that this variance is zero is rejected at 1% significance.

higher paid employment increases in a managerial/professional job type but the exit hazard from a low pay managerial occupation to out of the labour force decreases.

For both men and women, being employed in a public sector low paid job significantly increases the conditional hazard of exiting to a higher paid job but it also increases the conditional hazard of exit to out of the labour market, perhaps reflecting the ability of public sector employees to exploit early retirement schemes. In contrast to the case of men, employment in the public sector significantly decreases the likelihood of a low pay to unemployment transition for women.

Those males or females employed in part time and low pay jobs face a decreasing likelihood of escaping low pay and an increasing conditional hazard of exiting the active labour force. It therefore appears that part time low pay work does not represent a stepping stone to a labour market career with good prospects. Interestingly, men in part time and low pay jobs face an increased hazard of falling into unemployment. This is not the case for women and perhaps reflects the stronger labour market attachment of men who typically do not have the alternative of domestic commitments.

Bell and Pitt (1998) examined the question of whether the decline in trade union membership and collective bargaining coverage can explain the widening in the distribution of earnings in the UK over the 1980s. They found that between 19.1 and 23.5% of the rise in the standard deviation of male earnings is attributable to the decline in unionisation. The results of the present study show that if a low-paid male or female worker is employed in a firm, which is covered by trade union, then he or she faces a reduced hazard to any of the alternative labour market states considered in this study. In the case of low pay to out of labour market, women face a significantly lower hazard compared to their male counterparts. This reduced labour mobility out of low pay perhaps reflects the employment contract arrangements that frequently govern the employment relationships in trade union covered firms.

Employment in a low pay job in smaller or medium sized firms decreases the conditional hazard of exit to a higher paid job and the conditional hazard to exiting to unemployment for both men and women though the latter effect is significantly more important in the case of women in the medium sized firms compared to their male counterparts.

Family circumstances have some interesting effects on the conditional hazards of exiting low pay. Relative to a single person, a married individual –male or female- employed in a low pay job who has a spouse in employment faces a decreased conditional hazard of exiting to either to unemployment or to out of the labour market. Not surprisingly, the negative impact of this

characteristic on the conditional hazard of an exit to unemployment is greater for women (although the difference in the estimated coefficient is not statistically significant). Where the spouse does not have a job, there is a statistically significant difference between men and women in the effect of this characteristic on the conditional exit hazard to out of the labour force, with a positive effect on the exit hazard for women and an insignificant effect for men.

Research has shown that housing variables are important in labour market mobility (Boheim and Taylor, 2002). Relative to owing the house outright, being a council renter significantly decreases the conditional hazard of a transition from low pay to high pay for men and significantly increases the hazard of exit to unemployment for women.

Finally, to provide more information as to the source of the male-female differences, joint hypotheses tests for three groups of variables, namely, age, education, and housing variables are also reported. The results of these joint are not particularly conclusive. For example, there is some evidence from the joint tests that the impact of the education variables may differ for high pay and out of the labour force, although these differences do not appear to be sufficiently well-determined to have an the impact on the statistical significance of difference of the individual education coefficient across the male and female samples. Similarly, while there is evidence that the impact of individual age variables differs across the samples, the joint tests on the age variables are less conclusive. In contrast, there does appear to be some consistency between the joint and individual tests for the housing variables, which suggest that the impact of being in publicly rented accommodation has different impacts for men and women for both exits to higher paid jobs and exits to unemployment.

Marginal Effects

As discussed above, the interdependence between exit types implies that one cannot directly judge the overall implications for male-female differences from the parameter estimates reported in Table 2. To provide an initial evaluation of the potential impact of these differences the estimated coefficients for males and females are used to calculate the approximate marginal effects for each characteristic in Table 2. To do this, equations (2) and (3) are used to predict the overall hazard rates and the expected low pay duration by gender for each variable when the variable is equal to zero and compare this with the values when the variable is equal to one, with all other variables held at their pooled mean values. The results of these calculations are reported in Table 3. The interpretation of the derived results is straightforward. For example, for women, the marginal effect of being in part-time employment is to decrease the probability of an exit to a higher paid

job by 0.29 and to increase with the probability of an exit to out of the labour force by the same amount. In the last column it is revealed, that for a female being employed in a part-time job decreases the overall expected duration of the low pay spell by 11.5 months.

In line with the earlier results, compared to low paid workers, both male and females, who have obtained O-levels or A-levels face a reduction in overall expected duration of their low pay spell by just over 10 and 5.6 months respectively. This reduction increases to just over 14 months for males and almost 19 months for females who have obtained a University degree or equivalent. Importantly, education also increases the probability of an exit from low pay to high pay consistently for both men and women and decreases the probability of a low pay exit to unemployment or to the out of the labour market state.

Thus the value of accumulation of general human capital in endowing individuals in escaping low pay employment and reducing the likelihood of unemployment is supported by these findings. Overall, the results on the effect of human capital indicate an inverse relationship between educational attainment and low pay in line with many studies (Stewart, M.B. 1998, Stewart, M.B. 1998b, Stewart, M.B. and Swaffield (1998), Layard, Nickell and Jackman (1991)), and that experience of repeated spells of unemployment is inversely related to status and educational attainment (Stern (1989)). In terms of specific human capital, the effects are somewhat less clear-cut. On the job training does appear to increase the probability of exit to high pay, although the effect is slightly larger for women. It also decreases the probability of an exit to unemployment and out of the labour force for both men and women. However, it does increase the expected time spent in low pay for women although there is no such effect for men. The marginal impact of vocational training is small for both men and women although it does seem to reduce overall expected duration of low pay by more for women.

There are strong age effects. Relative to men over 55 years old, the overall expected duration of a low pay spell is less for all other age groups, ranging from a reduction of 20 months for men less than 25 years of age, to a decrease of 13 months for the 45 - 55 age group. In contrast, the impact of age on expected duration of a low pay spell appears very different for women. Relative to women over 55 years old, overall expected duration of a low pay spell is 8.2 months less for women aged less than 25, but increases by 14.9 months for women aged between 36 and 45, and by 24 months for the 45 to 56 age group.

In terms of the marginal effects on the exit probabilities, males in the youngest age group face an increased probability (0.07) of exiting to a high pay job compared to the over 55 age group with similar increases for the next two age categories. However, for women the probability is negative

for the youngest group (-0.07) but increases with advancing age to 0.04 for the 45 to 56 years group (similar to that of the male sample).

Turning to job characteristic variables, there are similar effects for both men and women in terms of the impact of part-time employment on the probability of an exit to a higher paid job and on the overall expected low pay duration, with a negative impact in both cases. Differences do arise though in the impact on the probability of an exit to unemployment (increasing for men only) and out of labour force (increasing substantially for women).

Employment in a low pay, public sector job is associated with an increased probability of moving to a high pay job for both men and women, although this effect is higher for women. In contrast, the reduction in the overall expected duration of the low pay spell is more substantial for men (by seven months).

Trade union coverage appears to increase the expected duration of a low pay spell for both groups and its effect is much higher for men than for women, consistent with the suggestion that union coverage reduces labour mobility out of low pay due to employment contract arrangements in unionised firms. In addition, it decreases the probability of an exit to high pay for women but it increases this probability for men.

As one would expect the impact of being employed in smaller firms is to decrease the probability of a low pay spell ending with a high pay exit and increases the expected duration low pay. However, relative to the largest firm size, being employed in a firm with less than 25 employees reduces the probability of a low pay exit to high pay for women by more than for men, although the expected duration of time spent in low pay is significantly higher for men.

There are also some interesting industry effects, with male-female differences both in the low pay exit probabilities and expected low pay duration (relative to primary industry). Men employed in manufacturing industry face a lower probability of an exit to a high paid job, an increase in the probability of a low pay exit to unemployment, and a lower expected duration in low pay compared to the omitted category. Women employed in manufacturing industry face a higher probability of an exit to a high paid job but no noticeable effect on expected duration. Similar male – female differences are also observed for service sector low pay employees.

Family circumstances do play a role in gender differences in the probability of exit from low pay. Thus, being married or cohabiting with a spouse who is in employment has similar qualitative

effects for both men and women, although the associated increase in expected low pay duration is much larger for women. Being married or cohabiting with a spouse who does not work has a rather small effects on the exit probabilities from a low pay spell, although it reduces the exit probability to high pay and the expected low pay duration, contrasting to the effect when a working spouse is present. In addition, for women, being married or cohabiting with a husband who does not work increases the probability of a low pay exit to labour market inactivity. Finally, the impact of a child has small overall effects although, as one would expect, it does increase the probability of a low pay exit to out of the labour force for women somewhat more than for men.

Male-female differences are also reported regarding the impact of housing tenure (relative to owning occupancy) particularly for those in the public rented sector. Although the living in this type of housing decreases the probability of a low pay exit to high pay exit for both men and women, it also decreases the probability of a low pay exit to labour market inactivity for women. Finally, the effect of housing tenure on the expected low pay duration is positive for men but negative for women.

Predicted Low Pay Duration and Exit Probabilities

The marginal effects presented in Table 3 provide evidence on whether the overall impact of particular covariates differs for men and women. However, they do not provide any information on the overall male–female differences in low pay exits and the expected duration of the low pay spell once the effect of differences in the observed characteristics is controlled for. Further, since the marginal effects are calculated at the mean, they do not reflect real world individual differences. To address these issues, the model estimates are used to calculate overall approximate exit hazard and expected low pay durations for male and female individuals at both mean characteristics and for some specific characteristics of interest. These results are reported in Table 4.

The first set of results in Table 4 show the predicted exit probabilities and expected durations using the overall male and female sample mean values for the variables. This provides some indication of the extent of male-female differences in low pay dynamics “on average” after controlling for differences in observed characteristics. It is shown that at these values the exit probabilities from a low pay spell to high pay and unemployment are higher for men. However, exit probabilities from a low pay spell to out of the labour force is 7 times smaller for men compared to that for women. Overall the expected low pay duration is smaller for women (27.7 months) compared to that of men (32.8 months). Men appear to have longer expected durations of

low pay spells ending to high pay and unemployment compared to women but the later face longer durations of low pay spells ending in labour market inactivity.

A further insight into the predictions of the estimated model at the mean values, is given by the overall predicted hazard rate for men and women at mean values which is illustrated in Figure 2. The predicted conditional exit probabilities (calculated by using equation (4)) are illustrated in Figures 3 and 4 for men and women respectively. The shapes of the predicted baseline hazards in Figure 2 reflect the shape of the estimated underlying baseline hazards for the two samples. There was some evidence particularly for exits to unemployment of differences in the underlying conditional baseline hazards for men and women from the hypothesis tests reported in Table 2. Figure 2 illustrates that women face lower overall low pay exit hazards in the beginning of the spell (roughly the first 6 months) compared to men but as the low pay spell lengthens, the baseline hazards become broadly similar with both declining sharply after the first 20 months.

Figures 3 and 4 also provide some evidence of gender differences in the pattern of exit probabilities conditional on the type of exit from the low spell in month *j* as a low pay spells progresses. For men there is a clear pattern with the probability of an exit to high pay (conditional on an exit in month *j*) increasing initially and then levelling off, while the probability of a low pay exit to unemployment (conditional on an exit in month *j*) is high at the beginning of a spell but it declines over the first 12 to 15 months and then levels off. In contrast, the pattern for women is less clear-cut with to be no clear trend in the probability of exit from a low pay spell to either unemployment or to a high pay job. However, in contrast to the case of men who face a flat conditional probability of a low pay exit to labour market inactivity, for women the probability of a low pay exit to out of the labour force (conditional that an exit occurs during month *j*) increases steadily as low pay duration increases.

To further illustrate the male-female differences in low pay dynamics predicted by the estimated model, the second panel of Table 4 reports the expected low pay durations and predicted exit probabilities for specific individual types. This highlights the impact of different characteristics on the probability of low pay exit by destination of exit and their effect on the expected duration of the low pay spell. The first set of results reported is for an individual (type 1) with the following characteristics: no qualifications, in part-time employment, unmarried with no children, aged less than 25 years old, living in the South West region in privately rented accommodation, employed in a small firm in the non-unionised service sector.

One notable feature for both type 1 men and women is that the probability of an exit to a higher paid job and expected low pay duration is substantially lower relative to the values obtained using

the mean characteristics. Further, for these characteristics there is no real difference in the expected low pay duration, and although qualitatively the gender differences in the predicted probabilities of exits to unemployment and out of the labour force are similar to those using mean characteristics the size of the differences is substantially greater.

The second panel of Table 4 reports the expected low pay durations and predicted exit probabilities for an individual (type 2) identical to a type 1 individual except that they have the following characteristics: age 25-35, single parent of two children and living in public rented accommodation. Once more the probability of a low pay exit to high pay is low for both men and women, although the predicted expected low pay duration is now substantially higher for men. Relative to a male type 1 individual, a type 2 male faces a significantly reduced probability of a low pay exit to out of the labour force, while relative to a type 1 female a type 2 female faces an increased probability of low pay exit to labour market inactivity.

The third panel of Table 4 reports the expected low pay durations and predicted exit probabilities for an individual (type 3) with identical characteristics with the last case but in addition the type 3 individual is working in a firm covered by a trade union, and is married with a jobless spouse. Although the impact of the trade union coverage is to increase the low pay duration, the probability of a high pay exit increases substantially relative to the type 1 and 2 individuals. There are some noticeable male-female differences in the probability of a low pay exit to high pay which is substantially higher for men compared to women. In addition, men face almost twice the expected low pay spell duration to that of women.

The fourth panel of Table 4 reports the expected low pay durations and predicted exit probabilities for an individual (type 4) with identical characteristics with the type 2 individual who has also vocational qualifications and has received work related training in the last 12 months. In this case an increase in the probability of a low pay spell exit to high pay is observed. In addition, there is a significant reduction in the probability of a low pay exit to unemployment for both men and women, although for a woman the probability of a low pay exit to out of the labour force remains substantially higher compared to that for men (over 0.5).

Finally, in the fifth panel of Table 4 the expected low pay durations and predicted exit probabilities for an individual (type 5) are reported. This individual has identical characteristics with the type 3 individual but in addition she/he is 46 to 55 years old married to a working spouse with no children and who has had work related training in the last 12 months. The results show that the male - female differences in the expected duration of a low pay spell is reversed compared to the case of a type 3 individual. In contrast to all the other cases examined here women now

appear to have longer expected low pay duration than men, most probably due to the differential effects of age. In addition, women exhibit a higher probability of a low pay exit to high pay than men again a reverse of the effect observed in the other cases.

5. CONCLUSIONS

In this paper, we explored whether the duration and exit type of low pay employment spells differs for men and women. Specifically, using data on low pay employment spells from the British Household Panel Survey, we estimated a competing risk model of low pay exits allowing for unobserved heterogeneity and three possible destinations, namely, to a 'high paid' job, unemployment and out of the labour force.

The results provide strong statistical evidence that the dynamics of low pay differ by gender. In particular, there is some evidence, in terms of exits to unemployment, that the duration dependence effects are different for men and women. This may suggest that the scarring effects of low pay are not the same for men and women. There is also evidence, across all exit types, that the impact of individual and job characteristics on the underlying baseline hazards is different for men and women. Although the source of these differences is somewhat more difficult to ascertain, there is some evidence of gender differences in the effect of age, education and housing tenure for exits to high pay. For unemployment exits, differences are apparent in the impact of firm size, of being part-time, on the job training, children, age and housing tenure. Finally, for exits to out of the labour force, there are differences in impact of trade union coverage, of being in a skilled occupation, of vocational training, having a married spouse without a job, and age.

The analysis of (approximate) marginal effects of the individual and job characteristics on the overall exit probabilities and expected duration provided useful information on the implications of the gender differences found from model estimation. For many characteristics, the qualitative marginal effects are similar for both men and women. For example, increasing general human capital increases the probability of an exit to a high-paid job and decreases the expected low pay duration. However, a number of particular gender differences are evident. The impact of age differs considerably for men and women. For men expected low pay duration increases and the probability of escape to a higher paid job decreases with age, while, for women, there is no clear-cut relationship. Although overall the effects of general human capital are similar qualitatively, there are also some differences in the effects of more specific human capital. In particular, on the job training increases the probability of exit to high pay for both genders, but it increases the expected time spent in low pay for women only.

These results also show that certain characteristics can have more somewhat complicated effects than might be expected. For example, the impact of part-time work substantially decreases the probability of an exit to a higher-paid job. However, it also decreases the expected duration of low pay for both men and women, although the exit type is more likely to be unemployment for men and out of the labour force for women.

Approximate exit probabilities and expected low pay durations were also calculated for specified sets of characteristics. At the mean values of the characteristics, the exit probabilities from a low pay spell to high pay and unemployment are higher for men, while the exit probability to out of the labour force is substantially smaller for men. However, the expected duration of a low pay spell is actually somewhat longer for men relative to women. The simulations using "typical" characteristics of those observed in low pay, e.g. no qualifications, part-time etc, show how the experience of low pay for such individuals differs from the average, with a substantially reduced probability of a low pay exit to a better paid job and significantly shorter expected low pay duration. The gender differences for such individuals appear mainly in the exit destinations out of low pay, in terms of whether they are more likely to exit to unemployment (men) or out of the labour force (women).

Indeed, although gender differences are evident in the exit probability to a high paid job, and in expected low pay duration, the consistent gender differences in the probability of a exit to unemployment and to out of the labour force are most evident from the results. This raises the question of how different is the typical trajectory for men and women who experience a period of low pay? To answer this effectively would require a more complicated modelling framework as by definition; the results here are conditional on individuals who are in low pay. This study has shown that the experience of those currently in low pay differs by gender. How the general trajectories of those who, at some point, experience low pay differ for men and women is a question for future research.

Table 1 Summary Statisics

		Men	Women
	Number of spells	2494	3290
Of which	Higher-paid job	1,110	1,334
	Unemployment	430	345
	Out of Labour Force	143	483
	Censored	811	1,128
	Conditional Mean Duration (Months)		
Exit to	Higher-paid job	16.39	15.1
	Unemployment	10.73	13.67
	Out of Labour Force	14.24	17.75
	Overall mean	21.96	24.24
	Public Sector	0.141	0.222
	Covered by Trade Union	0.195	0.192
	Firm Size less than 25 employees	0.364	0.453
	Firm Size 25 -99 employees	0.237	0.235
	Part-time	0.077	0.390
	Manufacturing	0.306	0.136
	Services	0.588	0.796
	Managerial and Professional	0.190	0.157
	Skilled	0.481	0.657
	O-level/A-levels	0.508	0.540
	Nursing etc	0.232	0.194
	Degree	0.118	0.105
	Vocational Training	0.315	0.359
	On-job training last 12 months	0.222	0.199
	Married -spouse has job	0.362	0.549
	Married-Spouse no job	0.142	0.067
	Number of Children	0.423	0.625
	Age 25 or less	0.418	0.328
	25 <Age < 36	0.291	0.303
	35 <Age < 46	0.144	0.203
	45 <Age < 56	0.101	0.139
	Private Rented	0.164	0.140
	Public Rented	0.200	0.196

Table 2 **Discrete Competing Risk Hazard Model: Male & Female Coefficients**

	Higher-paid jobs			Unemployment			Out of Labour Force		
	men	*women*		*men*	*women*		*men*	*women*	
			*						
Age 25 or less	0.711	-0.057	*	0.314	-0.267		-0.987	0.932	**
	(3.12)	(0.23)		(1.10)	(0.72)		(2.05)	(1.81)	
			*						
25 <Age < 36	0.798	0.067	*	0.253	-0.516		-2.437	0.497	**
	(3.54)	(0.28)		(0.89)	(1.38)		(4.55)	(0.99)	
			*						
35 <Age < 46	0.643	-0.086	*	0.200	-0.359		-2.560	-0.654	**
	(2.77)	(0.35)		(0.67)	(0.97)		(4.13)	(1.34)	
			*			*			
45 <Age < 56	0.519	-0.318	*	0.189	-0.871	*	-1.644	-0.502	
	(2.17)	(1.29)		(0.62)	(2.28)		(3.09)	(1.08)	
Married -spouse has job	0.075	-0.050		-0.274	-0.519		-1.047	-0.547	
	(0.97)	(0.78)		(2.07)	(4.10)		(2.93)	(2.96)	
Married-Spouse no job	0.102	0.116		0.151	0.135		-0.508	0.501	*
	(0.93)	(0.92)		(0.92)	(0.63)		(1.17)	(1.67)	
						*			
Number of Children	0.022	-0.004		-0.046	-0.290	*	0.239	0.287	
	(0.55)	(0.11)		(0.66)	(3.48)		(1.22)	(3.30)	
O-level/A-levels	0.405	0.360		-0.065	0.034		0.443	0.035	
	(3.47)	(3.42)		(0.40)	(0.19)		(1.09)	(0.15)	
Nursing etc	0.570	0.411		0.193	0.313		0.052	-0.086	
	(4.54)	(3.45)		(1.07)	(1.51)		(0.11)	(0.29)	
Degree	0.616	0.860		0.036	0.542		-0.411	0.685	
	(4.38)	(6.76)		(0.15)	(2.07)		(0.70)	(1.99)	
Vocational Training	-0.042	0.081		0.064	0.120		-0.414	0.187	*
	(0.61)	(1.31)		(0.56)	(0.95)		(1.36)	(1.09)	
						*			
On-job training last 12 months	0.282	0.233		-0.333	-0.737	*	-0.015	-0.146	
	(4.20)	(3.67)		(2.65)	(4.52)		(0.06)	(0.89)	
						*			
Part-time	-0.463	-0.477		0.696	-0.044	*	1.806	1.637	
	(2.92)	(6.62)		(4.30)	(0.33)		(5.60)	(8.04)	
						*			
Public Sector	0.174	0.217		0.122	-0.385	*	0.346	0.182	
	(1.88)	(2.95)		(0.70)	(2.02)		(0.97)	(0.94)	
Covered by Trade Union	-1.514	-1.348		-1.650	-1.295		-0.831	-1.751	**
	(14.89)	(14.60)		(9.02)	(6.52)		(2.56)	(7.12)	
Firm Size less than 25 employees	-0.441	-0.375		-0.255	-0.134		0.110	-0.260	
	(5.96)	(5.50)		(2.14)	(0.98)		(0.38)	(1.41)	
Firm Size 25 -99 employees	-0.208	-0.276		0.032	-0.364	*	-0.366	-0.176	

	(2.64)	(3.73)		(0.25)	(2.26)		(1.06)	(0.87)	

Table 2 continued **Discrete Competing Risk Hazard Model: Male & Female Coefficients**

	Higher-paid jobs			Unemployment			Out of Labour Force		
Manufacturing	0.158	0.174		0.567	0.289		-0.447	-0.367	
	(1.38)	(1.33)		(3.18)	(1.21)		(1.01)	(1.04)	
Services	0.295	0.203		0.130	0.079		0.042	-0.195	
	(2.72)	(1.80)		(0.73)	(0.36)		(0.11)	(0.67)	
Managerial and Professional	0.010	0.208		-0.449	-0.313		0.084	-0.570	
	(0.11)	(1.87)		(2.71)	(1.38)		(0.20)	(1.93)	
Skilled	-0.105	0.085		-0.374	-0.146		0.185	-0.592	**
	(1.40)	(0.96)		(3.43)	(1.01)		(0.67)	(3.02)	
Private Rented	0.055	0.009		0.122	0.217		0.483	0.007	
	(0.66)	(0.12)		(0.88)	(1.40)		(1.44)	(0.03)	
			*			*			
Public Rented	-0.343	0.011	*	0.032	0.434	*	0.262	-0.320	
	(3.78)	(0.14)		(0.26)	(3.21)		(0.86)	(1.61)	
Variance	0.001	(>0.999)		0.001	(>0.999)		2.142	(<0.001)	
Log Likelihood	-11116.1			-4232.2			-3575.3		
Male-Female differences Wald tests									
All Coefficients equal	0.058			<0.001			0.005		
Baseline Hazard dummies equal	0.123			0.083			0.444		
All Covariates coefficients equal	0.085			<0.001			0.004		
Education coefficients equal	0.052			0.497			0.075		
Age Coeffients equal	0.191			0.174			0.002		
Housing coefficients equal	0.009			0.090			0.197		

Absolute t values in brackets below estimated coefficients. *All* estimations also included separate baseline dummies for men and women plus a common set regional and time dummies. Starred Coefficients indicate statistically significant Male-female difference ** 5% * 10%

Table 3 Marginal Effects

	Exit probability			Expected Duration			
	Higher-paid job	Unemp	Out of Labour Force	Higher-paid job	Unemp.	Out of Labour Force	Overall
			Age 25 or less				
Men	0.07	-0.03	-0.03	-27.0	-9.2	-3.5	-20.2
Women	-0.07	-0.04	0.12	-12.0	-3.0	8.4	-8.2
			25 <Age < 36				
Men	0.10	-0.05	-0.05	-25.0	-9.1	-4.8	-17.9
Women	0.02	-0.07	0.06	-4.9	-3.7	3.6	-2.4
			35 <Age < 46				
Men	0.08	-0.04	-0.04	-20.5	-7.0	-2.9	-15.0
Women	0.07	-0.03	-0.04	17.6	0.9	-0.6	14.9
			45 <Age < 56				
Men	0.05	-0.03	-0.03	-17.7	-5.8	-2.0	-13.3
Women	0.04	-0.07	0.03	28.4	0.3	11.2	24.3
			Married -spouse has job				
Men	0.08	-0.06	-0.02	5.4	-2.0	-1.5	6.2
Women	0.08	-0.05	-0.03	15.3	-0.3	0.5	13.1
			Married-Spouse no job				
Men	-0.01	0.02	-0.01	-5.4	-0.8	-0.9	-4.3
Women	-0.03	0.00	0.03	-10.5	-1.6	-1.0	-8.2
			Number of Children				
Men	0.01	-0.01	0.01	-0.5	-0.7	0.3	-0.3
Women	0.00	-0.04	0.04	-1.6	-2.0	3.5	-0.5
			O-level/A-levels				
Men	0.07	-0.07	0.001	-14.0	-7.8	-0.5	-10.2
Women	0.08	-0.03	-0.06	-7.7	-3.2	-10.1	-5.6
			Nursing etc				
Men	0.05	-0.04	-0.01	-21.4	-7.1	-1.4	-16.5
Women	0.07	0.01	-0.08	-10.1	-2.0	-11.3	-7.7
			Degree				
Men	0.08	-0.07	-0.02	-19.5	-7.2	-1.5	-14.4
Women	0.10	-0.01	-0.09	-24.2	-4.7	-14.7	-18.9
			Vocational Training				
Men	-0.01	0.02	-0.01	1.2	1.3	-0.5	0.9
Women	-0.01	0.01	0.000	-5.7	-0.7	-1.7	-4.6
			On-job training last 12 months				
Men	0.09	-0.09	-0.004	-4.6	-5.6	-0.6	-1.7
Women	0.13	-0.09	-0.03	3.3	-4.1	-4.3	4.9

Continued

Table 3 Marginal Effects
(continued)

	Exit probability			Expected Duration			
	Higher-paid job	Unemp	Out of Labour Force	Higher-paid job	Unemp.	Out of Labour Force	Overall
			Part-time				
Men	-0.27	0.20	0.07	-10.5	9.4	5.4	-11.1
Women	-0.29	0.00	0.29	-21.6	-1.8	19.2	-11.5
			Public Sector				
Men	-0.001	-0.002	0.003	-8.9	-2.4	-0.1	-7.3
Women	0.07	-0.06	-0.01	-3.9	-3.4	-3.1	-1.8
			Covered by Trade Union				
Men	0.04	-0.08	0.03	163.5	32.9	12.3	133.9
Women	-0.05	-0.02	0.07	131.9	22.1	51.1	101.9
			Firm Size less than 25 employees				
Men	-0.03	0.01	0.01	21.1	6.7	1.9	16.3
Women	-0.06	0.02	0.04	13.1	3.6	9.8	9.9
			Firm Size 25 -99 employees				
Men	-0.03	0.04	-0.003	7.7	4.4	0.1	5.7
Women	-0.02	-0.02	0.04	12.7	1.4	9.4	10.5
			Manufacturing				
Men	-0.08	0.09	-0.01	-15.2	-0.1	-1.3	-13.1
Women	0.04	0.03	-0.07	-1.5	0.5	-7.9	-1.4
			Services				
Men	0.02	-0.02	-0.01	-13.8	-5.0	-1.1	-10.6
Women	0.06	0.00	-0.06	-0.9	-0.9	-7.7	-0.8
			Managerial and Professional				
Men	0.07	-0.08	0.004	7.7	-2.4	0.4	8.0
Women	0.12	-0.05	-0.07	6.3	-1.8	-7.6	6.7
			Skilled				
Men	0.05	-0.06	0.01	10.6	-0.1	0.9	9.3
Women	0.09	-0.02	-0.07	9.6	0.2	-5.3	7.8
			Private Rented				
Men	-0.02	0.01	0.01	-5.5	-0.7	0.5	-5.0
Women	-0.02	0.03	-0.01	-2.6	0.8	-1.4	-2.5
			Public Rented				
Men	-0.07	0.05	0.02	10.5	7.0	1.8	7.0
Women	-0.02	0.07	-0.05	-0.5	2.7	-4.7	-1.3

Derived from Table 2 estimation results. Approximate marginal effects are calculated by simulating the probabilities and expected durations when the variable is equal to zero and one, with all other variables held at their mean values.

Table 4: Predicted Exit Probabilities and Expected Durations

	Exit probability			Expected Duration			
	Higher-paid job	Unemp	Out of Labour Force	Higher-paid job	Unemp	Out of Labour Force	Overall
Mean values							
Men	0.75	0.23	0.02	40.9	9.3	1.6	32.8
Women	0.71	0.15	0.14	34.5	5.9	15.3	27.7
Type 1 Individual *							
Men	0.22	0.61	0.17	6.5	12.1	7.1	10.0
Women	0.20	0.36	0.44	3.6	5.8	18.5	11.0
Type 2 = Type 1 except 25-35 years old, with 2 children, living in public rented accomodation							
Men	0.26	0.65	0.09	13.9	26.1	6.4	21.2
Women	0.26	0.23	0.51	5.7	4.4	25.7	15.7
Type 3= Type 2 except married, spouse without job, workplace covered by union							
Men	0.61	0.34	0.04	203.0	106.4	13.1	161.3
Women	0.50	0.14	0.36	100.9	25.5	105.6	91.9
Type 4 = Type 2 except has vocational qualifications + work related training in last 12 months							
Men	0.37	0.56	0.07	23.2	26.4	5.6	23.8
Women	0.36	0.12	0.52	7.6	2.3	25.4	16.3
Type 5 = Type 3 except aged between 46 and 55, spouse has job, no children, and has had work related training in last 12 months							
Men	0.41	0.52	0.07	36.0	36.9	7.9	34.5
Women	0.50	0.17	0.33	61.6	17.9	68.5	56.6

*Type 1 Individual - no qualifications, aged less than 25, part-time, living in south west, unmarried, employee of firm <25 employees, in services, no union coverage, no children, living private rented accomodation

Figure 1: Kaplan Meier Survival Functions by Gender

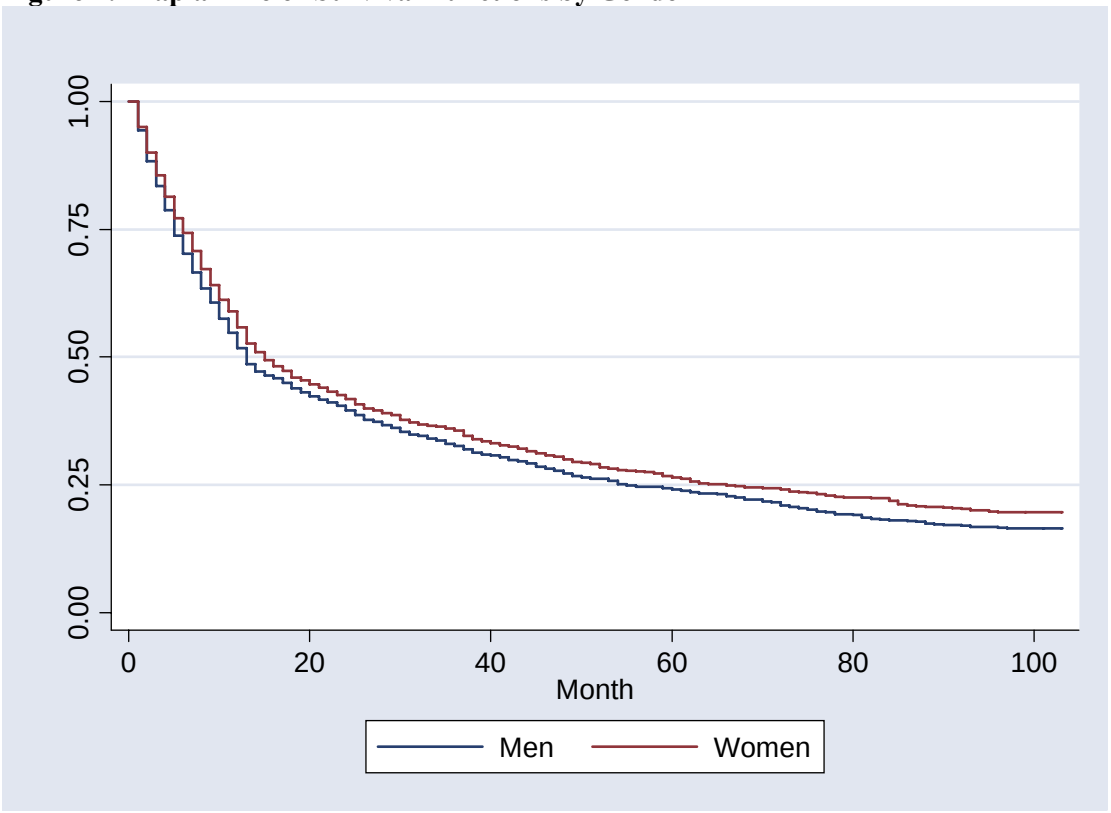


Figure 2: Predicted Baseline Hazards by Gender at Mean Covariate values

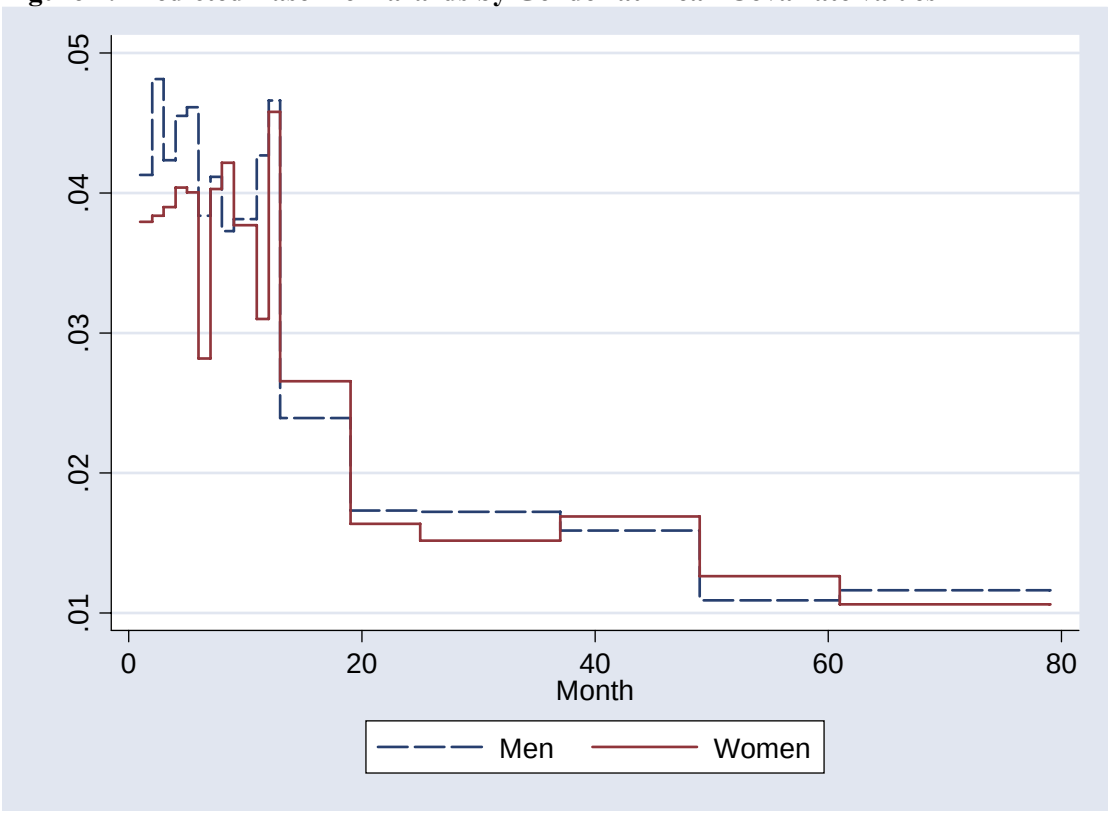


Figure 3. Probability of Exit by Destination Conditional on exiting during month *j* - Men

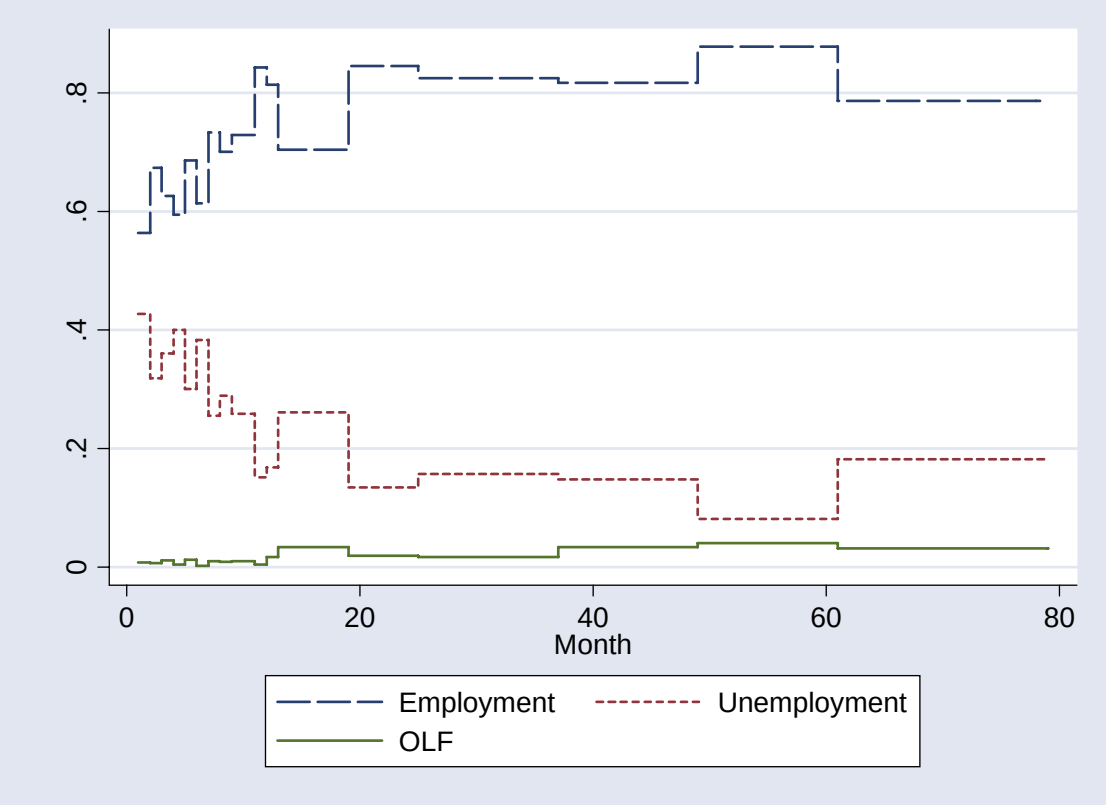
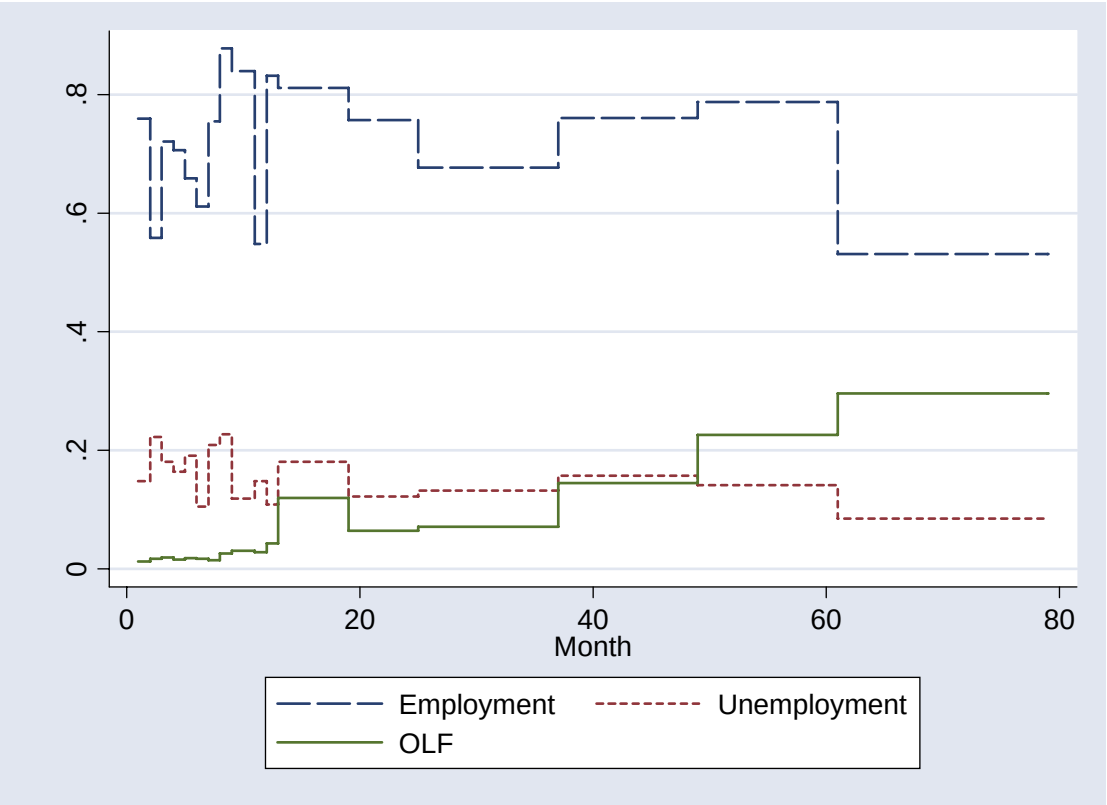


Figure 4. Probability of Exit by Destination Conditional on exiting during month *j* - Women



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