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## Working Paper Peer salaries and employee satisfaction in the workplace

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IZA DP No. 6673

# Peer Salaries and Employee Satisfaction in the Workplace

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June 2012

Forschungsinstitut zur Zukunft der Arbeit Institute for the Study of Labor

## Peer Salaries and Employee Satisfaction in the Workplace

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## ABSTRACT

## Peer Salaries and Employee Satisfaction in the Workplace

We explore the relationship between reported job satisfaction and own wage, relative wage and average comparison group wage; allowing for asymmetry in these responses across genders. We find that the choice of relevant comparison group is affected by gender in Britain; men display behaviour characteristic of competitiveness whilst women do not.

JEL Classification: J3, J7, J28

Keywords: job satisfaction, earnings, gender, segregation, workplace

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#### 1. Introduction.

A substantial and persistent earnings gap exists between male and female employees in Britain (see Table 1). Despite this sizable earnings gap, British women typically report higher levels of job satisfaction than do men.

| Table 1. Employee earnings by gender, Britain 2004. |        |        |       |  |  |  |  |  |
|---|--------|--------|-------|--|--|--|--|--|
|   | Male   | Female | All   |  |  |  |  |  |
| Average hourly wages                                | £10.55 | £8.76  | £9.70 |  |  |  |  |  |
| Average log hourly wages                            | 2.243  | 2.056  | 2.154 |  |  |  |  |  |
| Job satisfaction (index 0-6)                        | 3.318  | 3.606  | 3.453 |  |  |  |  |  |

D 14 1 2004 .....

Source: WERS 2004.

This paper considers this apparent contradiction by asking whether the higher job satisfaction reported by female employees is due to their being less concerned by the level of co-worker wages.

Employees appear to have a good understanding of their wage relative to their fellow employees, male or female, (Hampton and Heywood, 1993). This is not to say that they care equally about the gap between their own wage and the salaries of all other employees. It has long been recognised that workers compare their wages to other workers they consider to be similar to themselves by custom (Mill, 1867:236; Phelps Brown, 1979:134). Recently, Card et al (2012) have shown that the response of an employee to their relative wage is perhaps not obvious a priori. Workers may care about the absolute size of the gap between their own wage and the comparison group (Phelps Brown, 1979:141). Or they may distinguish between an increase in their own wage and a reduction in the average wage in the comparison group (Easterlin, 1995:36-37). Furthermore, the behavioural responses are not clearly established in the literature. Card et al (2012) propose a comparison between two approaches as between a model of relative utility where an employee may be dissatisfied if their wage is lower than other workers (see also Zizzo and Oswald, 2001) and a model of co-worker wage as a signal of future wages (see also Clark et al, 2009). Employees may also react asymmetrically to co-worker wages depending on whether they are being paid relatively higher or lower than their comparison group (Duesenberry, 1949; Clark et al, 2009; Ferrer-i-Carbonell, 2005).

This paper explores gender differences in the relationship between job satisfaction and relative wages amongst co-workers at the establishment level using linked employee and workplace data for Britain (WERS04). In particular, we address the possibility that that the relevant comparison group for individual workers is affected by gender.

#### 2. Data and methodology

Following Clark and Senik (2010) we model job satisfaction as:

$$S_{i} = S_{i}(W_{i}, W_{i} - W_{i}, X_{i}, ...)$$
<sup>(1)</sup>

Where  $S_i$  is the job satisfaction of worker *i*;  $W_i$  is the wage of that worker;  $\overline{W}_i$  is the average wage of their reference group and  $X_i$  is a vector of observable employee and workplace characteristics correlated with job satisfaction.

The matched employee-workplace data used in this study are drawn from the British Workplace Employee Relations Survey 2004 (WERS04). WERS04 is a stratified random sample of workplaces with 5 or more employees; larger workplaces and some industries are over-represented. The data have been weighted throughout the paper to allow for the (stratified and clustered) survey design and thus represent the sampling population.

An aggregate measure of job satisfaction is calculated from six satisfaction measures for the individual employee. These measures are satisfaction with: influence over job; sense of achievement; scope for using own initiative; pay; job security; and work. In each case a binary measure is constructed for positive responses ('satisfied' or 'very satisfied') and then these binary measures are summed to form the aggregate scaled job satisfaction index measure taking values from 0 to 6.

The employee characteristics included as determinants of job satisfaction are human capital related characteristics; demographic variables; and individual job characteristics. Workplace characteristics are physical and market conditions at the workplace including measures of high performance workplace practices (Lynch 2012).<sup>1</sup>

#### 3. Estimation and results

The model for the scaled measure of job satisfaction is estimated using the ordered probit estimation method. It is assumed that the measured satisfaction reflects a latent welfare variable ( $s^*$ ) dependent on observed characteristics (Z), which includes wage measures W and control variables X, and an unobserved component ( $\varepsilon$ ) for employee i in workplace k.

$$\vec{s_{ik}} = \beta Z_{ik} + \varepsilon_{ik} \tag{2}$$

where  $S_i = \lambda(s_{ik}^*)$  is a step function taking the category values 0-6 for job satisfaction according to  $s_{ik}^*$  crossing a set of threshold levels.

We are interested in the impact of alternative measures of wage relativity on job satisfaction for different comparison groups: the workplace average wage; and separately, the workplace average male and female wages. We begin with the individuals' own wage relative to the comparison group average: the *relative wage* (=  $log(W_i) - log(workplace comparison group average)$ ) as part of the model for job satisfaction discussed above. The results for relative wages (Table 2) reveal that employees have higher job satisfaction levels if their relative wage is above the workplace comparison group average (see panel 1 of Table 2). This is true for both males and females, although male job satisfaction is substantially more sensitive (the effect is almost twice as large) to relative wages than is female job satisfaction.

Next, the restriction that the own and the relative wage measure have an equal and opposite effect is removed (see panel 2). These results suggest that employees' job satisfaction is raised by increases in their own wage level (especially for males) and is significantly affected by an average comparison wage measure in their workplace, be it the average of male or female or all employees. However, we find a significant asymmetric comparison effect, especially for women.

<sup>&</sup>lt;sup>1</sup> Variable definitions and full results are provided in the Online Appendix.

We examine the possibility that employees respond differently to their wage being relatively higher or relatively lower than the comparison group in panel 3. Both male and female employees show a positive relationship between reported job satisfaction and their own wage. These estimates are significant and positive, and are not significantly different between the two genders. However, the results show that male employees also gain satisfaction from having a wage rate higher than the average for the workplace comparison group: more so if the comparison group is the males in the workplace (but not significantly so). In contrast, the reported job satisfaction of female employees is not significantly related to the average wages of their workplace co-workers, male or female.

Our results contrast in terms of relative significance with those of Card et al (2012) who find that job satisfaction is lower for those below median earners whilst those above the median show no higher satisfaction. Card et al (2012) do not report any differences in responses between males and females. Clark et al (2009) examine job satisfaction in Danish workplaces and report results that contrast with ours and Card et al (2012). Whilst they find that higher wages raises job satisfaction for all workers, they find that below median wage workers have higher satisfaction if they work in higher wage establishments. They show a somewhat less significant effect for females than males.

Our results show a clearly significant difference in the response of males and females to earnings comparisons. This chimes with studies that examine broader income comparisons, for instance with friends and neighbours. Mayraz et al (2010) find substantial gender differences with income comparisons being much better predictors of well-being in males than in females.

#### 4. Conclusions

Relative earnings is found to be an important determinant of job satisfaction for men; men care about their own wage level and the higher their wage is above the average wage (especially of other males) in their workplace. In contrast, women appear to be indifferent to the average wages of other men or women in their workplace. Their job satisfaction is sensitive only to their own wage level. Our evidence favours the relative utility model over a signalling explanation.

Our results suggest that the large earnings gap between men and women in British workplaces is not associated with lower job satisfaction levels for women whilst it is positively associated with higher job satisfaction levels for males. Consequently, it may be that little pressure is being exerted by either male or female employees to have the gender earnings gap reduced within their workplaces.

#### Acknowledgments

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#### Table 2. Job satisfaction and wage relativity.

|   | a      | I       | ma     | les     | females |         |  |
|---|--------|---------|--------|---------|---------|---------|--|
|   | coeff  | s.error | coeff  | s.error | coeff   | s.error |  |
| relative to average workplace wage        | 0.258  | 0.032   | 0.387  | 0.047   | 0.187   | 0.043   |  |
| relative to average male workplace wage   | 0.246  | 0.032   | 0.359  | 0.047   | 0.191   | 0.041   |  |
| relative to average female workplace wage | 0.222  | 0.034   | 0.326  | 0.051   | 0.167   | 0.042   |  |
| own wage                                  | 0.329  | 0.033   | 0.439  | 0.048   | 0.280   | 0.045   |  |
| average workplace wage                    | 0.031  | 0.072   | -0.113 | 0.099   | 0.111   | 0.086   |  |
| own wage                                  | 0.336  | 0.033   | 0.431  | 0.048   | 0.295   | 0.045   |  |
| average male workplace wage               | -0.012 | 0.063   | -0.063 | 0.091   | -0.002  | 0.071   |  |
| own wage                                  | 0.325  | 0.033   | 0.424  | 0.048   | 0.279   | 0.045   |  |
| average female workplace wage             | 0.062  | 0.071   | -0.041 | 0.103   | 0.116   | 0.078   |  |
| own wage                                  | 0.341  | 0.074   | 0.315  | 0.098   | 0.396   | 0.091   |  |
| above average workplace wage              | 0.190  | 0.094   | 0.457  | 0.123   | -0.161  | 0.139   |  |
| below average workplace wage              | -0.115 | 0.080   | -0.070 | 0.114   | -0.097  | 0.093   |  |
| own wage                                  | 0.303  | 0.067   | 0.364  | 0.092   | 0.290   | 0.079   |  |
| above average male workplace wage         | 0.280  | 0.093   | 0.416  | 0.124   | 0.033   | 0.140   |  |
| below average male workplace wage         | -0.066 | 0.069   | -0.103 | 0.104   | -0.004  | 0.076   |  |
| own wage                                  | 0.377  | 0.075   | 0.389  | 0.106   | 0.397   | 0.085   |  |
| above average female workplace wage       | 0.092  | 0.097   | 0.275  | 0.133   | -0.132  | 0.121   |  |
| below average female workplace wage       | -0.149 | 0.078   | -0.156 | 0.121   | -0.111  | 0.087   |  |
| number observations                       |        | 17810   |        | 8606    |         | 9183    |  |

Source: WERS 2004. The models include the full set of explanatory variables discussed above: individual characteristics; occupations; job characteristics; industry; workplace characteristics; regions; and measures of gender segregation at the workplace and the occupational level. (Full results are provided in the Online Appendix.) Italics significant at the 95% or bold 99% confidence level or above.

## **Online Appendix for**

## Peer salaries and employee satisfaction in the workplace.

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## Appendix Table A1. Variable definitions.

| Variable name          | Variable definition   |
|------------------------|---|
| job satisfaction index | Index of six job satisfaction measures for the individual employee: satisfaction with influence over job; satisfaction with pay; satisfaction with sense of achievement; satisfaction with scope for using own initiative; satisfaction with job security; satisfaction with work itself. |
| employee measures;     |   |
| log hourly pay         | The natural log of average hourly pay   |
| age                    | Age   |
| training               | Days of employer provided training in previous year   |
| education measures;    |   |
| other                  | Has other academic qualifications but doesn't have a listed recognised qualification  |
| none                   | Doesn't have a recognised academic qualification  |
| minimal                | Education 'none' or 'other' above.  |
| cse25                  | Has GCSE grades D-G; CSE grades 2-5 SCE; O grades D-; SCE Standard grades 4-7<br>Has GCSE grades A-C; GCE O-level passes; CSE grade 1 SCE; O grades A-C; or SCE   |
| CSEI                   | Standard I-3  |
| gceae                  | Has GCE A-level grades A-E; 1-2 SCE; Higher grades A-C, As levels   |
| gcezae                 | Has 2 or more GCE; A-levels grades A-E; 3 or more SCE; or Higher grades A-C   |
| degree                 | Has a lirst degree, eg BSc, BA, HND, HNC Ma at lirst degree level   |
| posigraduale           | Has a nigher degree, eg MSC, MA, PGCE, PhD  |
| lemale                 | Female  |
| child 0-18             | Has a dependent child aged below 18   |
| child E 11             | Youngest dependent child aged 0-4   |
| child 12 19            | Youngest dependent child aged 12-11   |
| cillu 12-10            | Married or living with a partner  |
| disabled               | Has a long form (>1 year) illness/disability  |
| ethnic                 | Final a long term (>1 year) interstruisability<br>Employee considers they are white and black Caribbean: white and black African: white and   |
| cume                   | Asian; any other mixed background; Indian; Pakistani; Bangladeshi; any other Asian<br>background; Caribbean; African; any other black background; Chinese; or other ethnic group.   |
| fixed contract         | Employed on a fixed term contract.  |
| hours                  | Usual hours worked per week (includes over time)  |
| standard hours         | Usual hours worked per week minus over time   |
| overtime hours         | Usual overtime hours per Week   |
| part time              | Working part time, if usual working hours is less than 30 per week  |
| tenure                 | Years at this workplace   |
| union                  | Employee is a current trade union member  |
| occupation categories; |   |
| managerial             | Managerial  |
| professional           | Professional  |
| technical              | Technical   |
| clerical               | Clerical  |
| craft                  | Craft service   |
| personal               | Personal service  |
| sales                  | Sales and customer services   |
| operative              | Operative and assembly workers  |
| unskilled              | Unskilled   |

| Variable name                      | Variable definition  |
|------------------------------------|--|
| industry categories;               |  |
| manufacturing                      | manufacturing  |
| utilities                          | electricity, gas, and water supply   |
| construction                       | construction   |
| whole/retail                       | Wholesale and retail   |
| hotels                             | hotels and restaurants   |
| transport                          | transport and communication  |
| financial services                 | financial services   |
| other business                     | other business services  |
| public admin                       | public administration  |
| education                          | education  |
| health                             | health and social work   |
| other community                    | other community services   |
| 5                                  | ,  |
| workplace measures;                |  |
| workplace age                      | Establishment age  |
| workplace size                     | Total number of employees at the workplace   |
| multi site                         | Firm has multiple UK work sites  |
| foreign owned                      | Foreign-controlled   |
| increasing market                  | Market for workplace main product or service is growing  |
| family friendly index              | Index of Six Family Friendly Policies: paternity leave; maternity leave; home working; job sharing: child care; paid leave |
| naternity leave                    | If employees on naternity leave receives the normal full rate of nay   |
| maternity leave                    | If employees on maternity leave receives the normal, full rate of pay  |
| home working                       | If employees can work at home  |
| iob sharing                        | If a job sharing scheme exists in the workplace  |
| child care                         | If a workplace nursery or child care subsidy is available at the workplace   |
| employee interaction index         | Index of five employee-employer interaction measures at the workplace: employee has a lot                                  |
|                                    | of discretion over work; quality circles exists; team working exists; employees consulted over                             |
|                                    | targets; employee briefing system exists   |
| IR index                           | Index of three industrial relations measures at the workplace: union membership presence;                                  |
|                                    | human resources representative; collective grievance procedure present   |
| equal opportunities                | Workplace has a formal written equal opportunity policy  |
| relative female workplace          | Percentage of the workplace employees who are female   |
| relative female occupation         | Percentage of the occupation who are female  |
| Dogions                            |  |
| north cast of England              | north east of England  |
| north west of England              | north west of England  |
| Norkshira & Humbarsida             | Norkchire 8 the Humberside   |
| oost midlands of England           | forksine & the Humberside  |
| west midlands of England           | east midlands of England   |
| west millionus or England          |  |
|                                    | east of England  |
| LUHUUH<br>south cast of England    | LUNUUN<br>south opst of England  |
| south west of England              | South wast of England  |
| South west of Eligiana<br>Scotland | South west of Eligidia<br>Sectord  |
| Scullariu<br>Walos                 | Scollariu<br>Wales   |
| wales                              | Walts  |

Source: WERS 2004.

### Table A2. Summary statistics.

|                               | a     | I       | ma    | le      | fem   | ale     |
|-------------------------------|-------|---------|-------|---------|-------|---------|
|                               | mean  | s.error | mean  | s.error | mean  | s.error |
| average hourly pay (£)        | 9.70  | 0.097   | 10.55 | 0.129   | 8.76  | 0.096   |
| log average hourly pay        | 2.154 | 0.010   | 2.243 | 0.012   | 2.056 | 0.010   |
| job satisfaction (index 0-6)  | 3.453 | 0.024   | 3.318 | 0.033   | 3.606 | 0.028   |
| age                           | 40.77 | 0.166   | 41.30 | 0.200   | 40.15 | 0.215   |
| training                      | 2.539 | 0.045   | 2.544 | 0.060   | 2.536 | 0.053   |
| minimal                       | 0 221 | 0.005   | 0.257 | 0.007   | 0 203 | 0.006   |
| cco25                         | 0.231 | 0.003   | 0.237 | 0.007   | 0.203 | 0.000   |
|                               | 0.090 | 0.005   | 0.102 | 0.005   | 0.090 | 0.004   |
| CSET                          | 0.200 | 0.005   | 0.217 | 0.000   | 0.293 | 0.007   |
|                               | 0.004 | 0.002   | 0.040 | 0.003   | 0.002 | 0.003   |
| Lezde<br>dograa               | 0.000 | 0.005   | 0.003 | 0.004   | 0.094 | 0.004   |
|                               | 0.197 | 0.005   | 0.210 | 0.007   | 0.182 | 0.000   |
|                               | 0.066 | 0.003   | 0.071 | 0.005   | 0.060 | 0.004   |
| child U-4                     | 0.121 | 0.003   | 0.147 | 0.005   | 0.093 | 0.004   |
|                               | 0.135 | 0.003   | 0.138 | 0.005   | 0.132 | 0.005   |
| Child 12-18                   | 0.120 | 0.003   | 0.113 | 0.004   | 0.128 | 0.004   |
| married                       | 0.671 | 0.005   | 0.686 | 0.007   | 0.655 | 0.007   |
| disabled                      | 0.117 | 0.003   | 0.127 | 0.004   | 0.106 | 0.004   |
| einnic<br>Sued terme contract | 0.058 | 0.004   | 0.059 | 0.005   | 0.057 | 0.005   |
| fixed term contract           | 0.031 | 0.002   | 0.029 | 0.003   | 0.034 | 0.003   |
| part-time                     | 0.222 | 0.006   | 0.087 | 0.005   | 0.372 | 0.009   |
| job tenure                    | 5.082 | 0.059   | 5.317 | 0.076   | 4.817 | 0.066   |
| trade union member            | 0.303 | 0.009   | 0.311 | 0.012   | 0.295 | 0.010   |
| temale                        | 0.472 | 0.008   | 0.000 | 0.000   | 1.000 | 0.000   |
| occupation:                   |       |         |       |         |       |         |
| managerial                    | 0.129 | 0.004   | 0.165 | 0.006   | 0.088 | 0.004   |
| professional                  | 0.113 | 0.005   | 0.122 | 0.007   | 0.103 | 0.006   |
| technical                     | 0.148 | 0.005   | 0.135 | 0.006   | 0.163 | 0.007   |
| clerical                      | 0.174 | 0.006   | 0.083 | 0.005   | 0.276 | 0.009   |
| craft                         | 0.080 | 0.005   | 0.139 | 0.009   | 0.013 | 0.002   |
| personal                      | 0.067 | 0.004   | 0.029 | 0.003   | 0.110 | 0.006   |
| sales                         | 0.077 | 0.005   | 0.046 | 0.004   | 0.111 | 0.008   |
| operative                     | 0.092 | 0.005   | 0.147 | 0.008   | 0.032 | 0.005   |
| unskilled                     | 0.120 | 0.006   | 0.134 | 0.008   | 0.105 | 0.006   |
| industry:                     |       |         |       |         |       |         |
| manufacturing                 | 0.186 | 0.008   | 0.267 | 0.012   | 0.097 | 0.007   |
| utilities                     | 0.005 | 0.001   | 0.006 | 0.001   | 0.003 | 0.001   |
| construction                  | 0.047 | 0.005   | 0.073 | 0.009   | 0.018 | 0.002   |
| whole/retail                  | 0.137 | 0.007   | 0.134 | 0.010   | 0.140 | 0.009   |
| hotels                        | 0.038 | 0.004   | 0.030 | 0.004   | 0.047 | 0.005   |
| transport                     | 0.065 | 0.004   | 0.088 | 0.006   | 0.038 | 0.004   |
| financial services            | 0.059 | 0.005   | 0.052 | 0.005   | 0.067 | 0.007   |
| other business                | 0.151 | 0.009   | 0.152 | 0.012   | 0.150 | 0.011   |
| public admin                  | 0.051 | 0.004   | 0.048 | 0.005   | 0.054 | 0.005   |
| education                     | 0.092 | 0.004   | 0.049 | 0.003   | 0.141 | 0.007   |

|                            | all   |         | ma    | le      | female |         |  |
|----------------------------|-------|---------|-------|---------|--------|---------|--|
|                            | mean  | s.error | mean  | s.error | mean   | s.error |  |
| health                     | 0.123 | 0.006   | 0.054 | 0.005   | 0.199  | 0.010   |  |
| other community            | 0.046 | 0.005   | 0.047 | 0.006   | 0.045  | 0.005   |  |
| workplace age              | 44.53 | 1.833   | 45.59 | 2.153   | 43.36  | 1.943   |  |
| workplace size             | 420.1 | 21.83   | 420.8 | 27.27   | 419.8  | 28.21   |  |
| multi site                 | 0.747 | 0.014   | 0.729 | 0.017   | 0.767  | 0.014   |  |
| foreign owned              | 0.153 | 0.012   | 0.194 | 0.016   | 0.108  | 0.011   |  |
| increasing market          | 0.331 | 0.015   | 0.344 | 0.018   | 0.316  | 0.016   |  |
| family friendly index      | 3.071 | 0.044   | 2.924 | 0.055   | 3.234  | 0.048   |  |
| IR index                   | 2.608 | 0.035   | 2.565 | 0.043   | 2.657  | 0.039   |  |
| HP practices               | 1.190 | 0.027   | 1.178 | 0.032   | 1.204  | 0.030   |  |
| equal opportunity policy   | 0.856 | 0.010   | 0.839 | 0.013   | 0.875  | 0.011   |  |
| relative female workplace  | 49.15 | 0.800   | 33.37 | 0.787   | 66.75  | 0.609   |  |
| relative female occupation | 51.01 | 0.394   | 41.70 | 0.481   | 61.39  | 0.384   |  |
| regions:                   |       |         |       |         |        |         |  |
| north east of England      | 0.042 | 0.007   | 0.045 | 0.009   | 0.038  | 0.006   |  |
| north west of England      | 0.146 | 0.012   | 0.150 | 0.014   | 0.141  | 0.013   |  |
| Yorkshire & Humberside     | 0.090 | 0.010   | 0.090 | 0.012   | 0.091  | 0.011   |  |
| east midlands of England   | 0.094 | 0.009   | 0.091 | 0.011   | 0.097  | 0.011   |  |
| west midlands of England   | 0.090 | 0.009   | 0.093 | 0.011   | 0.087  | 0.010   |  |
| east of England            | 0.106 | 0.009   | 0.100 | 0.011   | 0.112  | 0.011   |  |
| London                     | 0.131 | 0.011   | 0.128 | 0.013   | 0.133  | 0.013   |  |
| south east of England      | 0.079 | 0.008   | 0.074 | 0.009   | 0.086  | 0.010   |  |
| south west of England      | 0.118 | 0.011   | 0.119 | 0.014   | 0.117  | 0.012   |  |
| Scotland                   | 0.037 | 0.005   | 0.039 | 0.006   | 0.035  | 0.006   |  |
| Wales                      | 3.453 | 0.024   | 3.318 | 0.033   | 3.606  | 0.028   |  |
| number of observations     |       | 17810   |       | 8606    |        | 9183    |  |

Source: WERS 2004.

#### Table A3. Job satisfaction, ordered probits.

|                           | al            | I       |       | males  |         |       | femal  | es      | <u>.</u> |
|---------------------------|---------------|---------|-------|--------|---------|-------|--------|---------|----------|
|                           | coeff         | s.error | z val | coeff  | s.error | z val | coeff  | s.error | z val    |
|                           |               |         | 4.4.4 |        |         | ***   |        |         | ***      |
| age                       | -0.029        | 0.007   |       | -0.029 | 0.009   |       | -0.028 | 0.009   |          |
| age squared               | 0.431         | 0.079   | ***   | 0.429  | 0.106   | ***   | 0.409  | 0.112   | ***      |
| training                  | 0.072         | 0.004   | ***   | 0.077  | 0.005   | ***   | 0.066  | 0.005   | ***      |
| education (education mir  | nimal omitted | d)      |       |        |         |       |        |         |          |
| cse25                     | -0.066        | 0.040   |       | -0.140 | 0.055   | **    | 0.027  | 0.057   |          |
| cse1                      | -0.168        | 0.030   | ***   | -0.227 | 0.043   | ***   | -0.103 | 0.043   | **       |
| ceae                      | -0.229        | 0.045   | ***   | -0.230 | 0.070   | ***   | -0.216 | 0.062   | ***      |
| ce2ae                     | -0.189        | 0.044   | ***   | -0.231 | 0.064   | ***   | -0.155 | 0.057   | ***      |
| degree                    | -0.232        | 0.039   | ***   | -0.260 | 0.052   | ***   | -0.187 | 0.053   | ***      |
| postgraduate              | -0.234        | 0.048   | ***   | -0.215 | 0.067   | ***   | -0.271 | 0.065   | ***      |
| child 0-4                 | 0.013         | 0.034   |       | -0.009 | 0.043   |       | 0.038  | 0.053   |          |
| child 5-11                | 0.098         | 0.032   | ***   | 0.123  | 0.044   | ***   | 0.064  | 0.046   |          |
| child 12-18               | 0.052         | 0.030   |       | 0.026  | 0.046   |       | 0.072  | 0.041   |          |
| married                   | 0.105         | 0.024   | ***   | 0.159  | 0.035   | ***   | 0.054  | 0.030   |          |
| disabled                  | -0.188        | 0.029   | ***   | -0.199 | 0.039   | ***   | -0.192 | 0.041   | ***      |
| ethnic                    | -0.022        | 0.043   |       | 0.078  | 0.060   |       | -0.126 | 0.065   | **       |
| fixed contract            | -0.151        | 0.052   | ***   | -0.115 | 0.074   |       | -0.167 | 0.075   | **       |
| part-time                 | 0.138         | 0.028   | ***   | 0.144  | 0.054   | ***   | 0.128  | 0.033   | ***      |
| tenure                    | 0.002         | 0.003   |       | -0.004 | 0.005   |       | 0.009  | 0.004   | **       |
| union                     | -0.132        | 0.026   | ***   | -0.132 | 0.036   | ***   | -0.114 | 0.034   | ***      |
| occupation (craft/persona | al services o | mitted) |       |        |         |       |        |         |          |
| managerial                | 0.319         | 0.044   | ***   | 0.363  | 0.055   | ***   | 0.198  | 0.086   | **       |
| professional              | 0.178         | 0.044   | ***   | 0.129  | 0.066   |       | 0.256  | 0.070   | ***      |
| technical                 | 0.105         | 0.039   | ***   | 0.153  | 0.067   | **    | 0.045  | 0.055   |          |
| clerical                  | 0.051         | 0.045   |       | 0.077  | 0.090   |       | 0.019  | 0.050   |          |
| sales                     | -0.064        | 0.061   |       | -0.033 | 0.098   |       | -0.076 | 0.072   |          |
| operative                 | -0.077        | 0.052   |       | -0.062 | 0.055   |       | -0.149 | 0.130   |          |
| unskilled                 | 0.004         | 0.047   |       | -0.016 | 0.067   |       | 0.056  | 0.075   |          |
| industry (manufacturing   | omitted)      |         |       |        |         |       |        |         |          |
| utilities                 | 0.033         | 0.111   |       | -0.004 | 0.130   |       | 0.065  | 0.230   |          |
| construction              | 0.245         | 0.062   | ***   | 0.220  | 0.070   | ***   | 0.297  | 0.136   | **       |
| whole/retail              | 0.207         | 0.053   | ***   | 0.235  | 0.062   | ***   | 0.166  | 0.077   | **       |
| hotels                    | 0.171         | 0.073   | **    | 0.245  | 0.109   | **    | 0.061  | 0.092   |          |
| transport                 | -0.013        | 0.065   |       | -0.059 | 0.078   |       | 0.072  | 0.088   |          |
| financial services        | -0.078        | 0.067   |       | -0.112 | 0.084   |       | -0.077 | 0.082   |          |
|                           |               |         |       |        |         |       |        |         |          |

|                          | al         | I       |       | males      |         |       | femal      | females |       |
|--------------------------|------------|---------|-------|------------|---------|-------|------------|---------|-------|
|                          | coeff      | s.error | z val | coeff      | s.error | z val | coeff      | s.error | z val |
|                          |            |         |       |            |         |       |            |         |       |
| other business           | 0.089      | 0.052   |       | 0.088      | 0.063   |       | 0.091      | 0.074   |       |
| public admin             | 0.063      | 0.066   |       | -0.005     | 0.075   |       | 0.109      | 0.095   |       |
| education                | 0.231      | 0.057   | ***   | 0.151      | 0.081   | **    | 0.267      | 0.080   | ***   |
| health                   | 0.251      | 0.057   | ***   | 0.136      | 0.097   |       | 0.336      | 0.076   | ***   |
| other community          | 0.172      | 0.068   | ***   | 0.208      | 0.077   | ***   | 0.128      | 0.095   |       |
| workplace age            | 0.000      | 0.000   |       | 0.000      | 0.000   |       | 0.000      | 0.000   |       |
| workplace size           | 0.000      | 0.000   |       | 0.000      | 0.000   |       | 0.000      | 0.000   |       |
| multi site               | -0.110     | 0.034   | ***   | -0.146     | 0.047   | ***   | -0.077     | 0.040   | **    |
| foreign owned            | -0.027     | 0.039   |       | -0.080     | 0.047   | **    | 0.075      | 0.055   |       |
| increasing market        | 0.054      | 0.028   | **    | 0.049      | 0.038   |       | 0.064      | 0.034   | **    |
| family friendly index    | -0.016     | 0.010   |       | -0.006     | 0.013   |       | -0.028     | 0.012   | **    |
| IR index                 | -0.011     | 0.012   |       | 0.001      | 0.015   |       | -0.021     | 0.015   |       |
| employee interaction     | -0.022     | 0.015   |       | -0.019     | 0.020   |       | -0.020     | 0.020   |       |
| equal opp                | -0.114     | 0.047   | **    | -0.128     | 0.061   | **    | -0.110     | 0.057   | **    |
| rel female workplace     | 0.000      | 0.001   |       | 0.001      | 0.001   |       | -0.001     | 0.001   |       |
| rel female occupation    | 0.000      | 0.001   |       | -0.001     | 0.001   |       | -0.001     | 0.002   |       |
| Region (east Midlands or | nitted):   |         |       |            |         |       |            |         |       |
| north east of England    | -0.086     | 0.089   |       | 0.053      | 0.102   |       | -0.246     | 0.113   | **    |
| north west of England    | -0.064     | 0.059   |       | -0.048     | 0.072   |       | -0.076     | 0.072   |       |
| Yorkshire & Humber       | -0.043     | 0.066   |       | 0.045      | 0.084   |       | -0.127     | 0.077   |       |
| west Midland England     | -0.072     | 0.063   |       | -0.085     | 0.084   |       | -0.069     | 0.073   |       |
| east of England          | -0.096     | 0.070   |       | -0.032     | 0.097   |       | -0.162     | 0.079   | **    |
| London                   | -0.060     | 0.067   |       | 0.035      | 0.086   |       | -0.159     | 0.080   | **    |
| south east of England    | -0.081     | 0.059   |       | -0.028     | 0.073   |       | -0.146     | 0.072   | **    |
| south west of England    | -0.033     | 0.065   |       | 0.034      | 0.086   |       | -0.106     | 0.078   |       |
| Scotland                 | -0.093     | 0.061   |       | -0.032     | 0.078   |       | -0.174     | 0.075   | **    |
| Wales                    | -0.020     | 0.071   |       | 0.063      | 0.094   |       | -0.131     | 0.100   |       |
| female                   | 0.117      | 0.024   | ***   |            |         |       |            |         |       |
|                          |            |         |       |            |         |       |            |         |       |
| number observations      |            | 17810   |       |            | 8606    |       |            | 9183    |       |
|                          | -(59,1294) | 19.090  |       | F(58,1182) | 12.830  |       | F(58,1209) | 9.790   |       |

Source: WERS 2004. \*\* Significant at the 95% or \*\*\* 99% confidence level or above.