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Measuring The Quality Of Jobs

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I. INTRODUCTION

Within Europe there has been concern not only about the quantity of available work, but also about the quality of jobs, as many new jobs have been part-time or only of temporary duration. However, jobs consist of a number of elements. Thus, Beatson (2000) distinguishes between the economic contract which defines the effort/reward relationship and the psychological contract which defines the relationship between employer and employee in terms of working conditions. A further distinction can be drawn between extrinsic job characteristics, such as financial rewards, working time, work/life balance, job security and opportunities for advancement and intrinsic job characteristics such as job content, work intensity, risk of ill health or injury and relationship with co-workers and managers. Beatson (2000) argues that because of the diversity of these characteristics it is not possible to reduce them to a single dimension in order to rank the range of jobs according to their quality.

In this paper we reject the view that it is not possible to measure job quality and attempt to proxy job quality by drawing from two contrasting strands of the literature - that on labour market segmentation and that on job satisfaction. The labour market segmentation literature finds its most extreme formulation in the dual labour market hypothesis. The essentials of this model are that there are two (at least) distinct labour markets. Whilst workers compete within each market they do not compete across them as there are barriers to mobility between them. It is further argued that we can classify jobs into good and bad jobs with the former not only having better working conditions, but also higher pay than the latter. This contrasts with the theory of compensating differentials in which jobs with poor working conditions would be expected, *ceteris paribus*, to compensate for this with higher pay. Consistent with this approach we split our sample into two segments, first on the basis of whether or not workers have promotion prospects and second on the basis of whether or not they have low paid jobs, defined as less than two thirds of the median. We then examine briefly the extent of working across these segments.

We also extend earlier work by using job satisfaction as reported by workers to examine whether workers rate primary sector (or good) jobs with promotion prospects or higher pay more highly than secondary sector (or poor) jobs without promotion prospects or poorly paid, controlling for relevant variables which are implicit in the idea of ‘good’ jobs and ‘bad jobs.’¹ Our data set has information not only on overall job satisfaction measured on a seven point scale, but also on various facets of job satisfaction (promotion prospects, total pay, job security, relations with boss, initiative, work itself and hours worked). We argue that if overall job satisfaction can be explained by those individual facets, it should serve as a reasonable proxy for the overall quality of work as perceived by the individual worker.

Empirical labour economics has until recently overwhelmingly focused on wages and hours of work, as indicators of “job quality”, to the neglect of other features of work. Yet evidence suggests that these variables tend to be ranked relatively lowly in terms of what individual workers claim is important to them in their jobs. Workers are also concerned with job security, inter-personal relationships, issues of equity and fairness, but above all with the nature of work itself, their prospects for advancement and career progression.

Hence, workers’ behaviour with regard to their labour force participation, voluntary quits, and on-the-job effort is most likely to depend in part upon their subjective evaluation of their jobs; in other words on their job satisfaction. Akerlof, Rose and Yellen (1988) note that 73 per cent of their sample stated that liking work was more important than good wages. While as far as pay itself is concerned it seems that relative pay matters more than absolute pay, though with whom workers make comparisons is difficult to establish (Clark and Oswald, 1996).

Recent empirical findings have shown that responses with regard to job satisfaction can be strong predictors of individual behaviour. For example, job satisfaction may be used to predict individual behaviour such as quits, absenteeism and worker productivity.² It is true that what two different ‘very satisfied’ workers perceive to be a high level of job satisfaction may not be identical. However, it can still be argued

¹ For an earlier attempt to use job evaluation to rank good jobs and bad jobs see Clark (1999).

² Akerlof, Rose and Yellen (1988), Freeman (1978), Hamermesh (1977) and McEvoy and Cascio (1985) report job satisfaction as an important predictor of quit behaviour, while Clegg (1983) and Mangione and Quinn (1975) find a negative correlation between job satisfaction, absenteeism and worker productivity.

that satisfied workers are more productive and less likely to quit or be absent from work than those workers with lower reported levels of job satisfaction. Hence the justification for studying subjective assessments of job satisfaction is that they have been found to be strongly correlated with observable events and actions.³

The economic literature on job satisfaction has focused on explaining workers overall job satisfaction using their individual job and personal characteristics, such as absolute and relative wages, hours of work, experience, gender, education, marital status, trade union membership, hours of work or firm size. Earlier work may be divided into those studies examining job satisfaction for the workforce as a whole (Hamermesh, 1977; Clark, 1996; Clark and Oswald, 1996), those focusing on race, gender, managers or establishment size (Bartel, 1991; Watson et al, 1996; Clark, 1997; Idson, 1990), those analysing the effects of trade union membership (Borjas, 1979; Miller, 1990; Meng, 1990; Bender and Sloane, 1998) and those considering the academic labour market (Ward and Sloane, 2000).

A number of these papers showed that satisfaction is often only weakly related to wages and, more importantly depends on a great deal else besides. Clark (1996, 1997) found that, among others, variables measuring the worker's position, or potential position, in the firm's hierarchy, are strong predictors of job satisfaction. The availability of opportunities for promotion has a positive effect on overall job satisfaction as well as satisfaction with pay or with work itself. Sloane and Williams (2000) also argue that men have significantly higher job satisfaction than women when there are promotion prospects or when they perceive themselves as having a career. In addition, Ward and Sloane (2000) note that academics find that the smaller opportunity for promotion in academia exerts a strong and negative influence on the individuals' overall job satisfaction.

It is, therefore, important to examine how much of the difference in the self-reported levels of overall satisfaction between otherwise similar individuals is accounted by the increasingly changing face of employment contracts, the prominence of career development and the establishment of job ladders within firms. There are good reasons to believe that different factors are expected to determine individuals' overall job satisfaction depending on whether these individuals are on a career path or not and given certain personal, occupational and industrial characteristics.

³ See Clark and Oswald (1996) for a detailed discussion of these.

This paper uses information on 7,190 male and female British workers from the British Household Panel Survey observed over a period of seven years. It is one of the first studies to use panel data in Britain to explore job satisfaction issues. We extend earlier work by using job satisfaction as reported by workers in annual intervals to examine whether workers rate jobs with promotion prospects and career advancement more highly than others that do not include such prospects, controlling for pay and other relevant variables. Second, we repeat the analysis distinguishing between low paid and all remaining jobs.

Our first aim is to examine the possibility that the determinants of job satisfaction differ between workers with and without promotion prospects and hence with and without the prospect of a career path in their current jobs. The second aim of the paper is to contribute to the recent empirical literature on comparison income effects in individual job satisfaction. These models, inspired by a large body of research in psychology, have shown that the level of job satisfaction for an individual not only depends on his or her current income but also on some comparison level of income which could be what the individual expected to earn, his or her past wage, what family or friends earn, or the ‘going wage’ for other comparable individuals in the same profession. It is this latter comparison that we shall explore here, first in the context of career and non-career employment and then in the context of low and higher paid jobs.

Our results show that job satisfaction is, indeed, higher for workers with promotion, or career prospects than for those without. There are also important gender differences with respect to the determinants of overall job satisfaction. In contrast, overall job satisfaction is actually higher in low paid jobs than in higher paid jobs for women and all workers combined, and this is generally true for facets of job satisfaction apart from pay.

The paper is organised as follows. Section two discusses briefly the link between promotion prospects, career and job satisfaction. Sections three and four present the tools of our econometric analysis and describe the data set and the main variables of interest. The main empirical results are presented in sections six, seven and eight while section nine concludes.

II PROMOTION VERSUS NON-PROMOTION EMPLOYMENT

In the traditional supply-based theory of wage determination, a vector of endowed and acquired worker characteristics uniquely and monotonically determines individual earnings. Against such framework the concept of a 'job' has been made somehow redundant, while the role of occupational and industrial characteristics in explaining worker remuneration is simple limited to reducing residual variance.

However, one cannot ignore the fact that workers are indeed sorted into jobs, and that a worker's progress and performance is likely to depend on the firm's strategy for developing effective mechanisms to promote and assess productivity while economising on its labour costs. A firm may therefore offer its employees better remuneration or development opportunities, such as the prospect of building a career, while remaining in its employment. Life-cycle progression and wage growth in this case may be achieved through promotion via a firm's job ladder.

Mincer (1962), Becker (1975), Burdett (1978), Jovanovic (1984) and Salop and Salop (1976) have argued that the screening and training of new employees creates substantial costs for both firms and workers. Firms would therefore, attempt to discourage labour turnover and inter-firm mobility among their most highly valued workers by providing them with promotion paths and rewards commensurate with tenure in order to establish long-term employment relationships. Wage increases promised to these employees will also remain unaffected during periods of slack product demand in order to isolate their earnings from external market conditions and secure a loyal workforce (Okun, 1981).

However, given the costs associated with promotion structures, firms will also find it optimal to operate a non-promotion strategy for part of their labour force. By minimising the firm's investment in this section of its labour force, this strategy makes labour an interchangeable factor of production, while introducing an element of uncertainty into employee career development.⁴

The above imply that at the aggregate level the workforce may be decomposed into two groups: employees who enjoy promotion, and ultimately career prospects, and

⁴ Theodossiou (1995) offers some evidence that earnings in the two sectors of the two-tier career non-career labour market respond with different patterns to local demand conditions.

employees who do not. The two types of workers in this study are therefore distinguished according to this criterion. A worker with a promotion prospects contract possess an explicit or implicit guarantee by his or her employer that continuous employment with the firm will result in his or her advancement to a higher occupational status and an upward career path.

An employee with promotion or career prospects is defined here as an individual who is in salaried employment and who enjoys promotion prospects within his or her current employment situation or his or her salary increases on an incremental pay scale. Thus it can be assumed that for any employee of this type there is an implicit or explicit understanding of an upward occupational profile, given that the first criterion controls directly for the existence of a career path in the worker's current employment and the latter controls for automatic promotions. This in turn is expected to enhance the employee's utility from work and thus encourage long and stable employer-employee attachments.

One would therefore expect that employees with promotion prospects contracts, and thus explicit or implicit career opportunities, would appear to be more content and satisfied from their job than their otherwise comparable counterparts who lack such opportunities unless the absence of these elements is fully compensated for by higher pay or there are differences in tastes for particular types of work. The determinants of job satisfaction would therefore be expected to differ between these two different types of workers.

III PROMOTION PROSPECTS AND JOB SATISFACTION

The most obvious and straightforward approach to control for the different effects that the existence of a career path may have on the individual's self-reported level of overall job satisfaction is to include a dummy variable to indicate individual attachment to a career path. The coefficient on the promotion prospects dummy would then indicate whether attachment to a career path, holding all other individual and workplace characteristics constants, results in higher overall satisfaction.⁵ This indeed seems to be the most commonly found result in the literature (Clark, 1996, 1997; Sloane and Williams, 2000; Ward and Sloane, 1999).

⁵ Individual job satisfaction regressions, which include such variables, have in our case very significant positive coefficients. Results can be obtained from the authors on request.

However, this approach may be too simple for it does not allow for any interactions between an individual's career prospects and other personal, occupational, industrial and workplace characteristics for which we are controlling. Workers with promotion prospects for example may well report higher levels of overall job satisfaction to any given pecuniary rewards, increments to human capital, or employment in certain industrial sectors of the economy. In this case the coefficients on some of the other variables will also differ for the career group.

Accordingly a more satisfactory approach would be to undertake a separate analysis of employees with promotion, and hence career prospects and those without, in order to unearth any differences in the way their respective overall job satisfaction is determined. By disaggregating the overall job satisfaction equations by individual attachment to a career path, we can examine whether the salient determinants of job satisfaction are the same for all groups. Hence the next step would actually be to define more precisely the exact meaning of employees with promotion prospects using the available information in the data set.

Clearly the dividing line which splits off promotion employees from the rest will be crucial but a degree of overlapping may be expected since there are various kinds of employer-employee attachments. Nonetheless it is anticipated that the difference between the working experiences of the two types of workers is of such magnitude as to generate a different job satisfaction determination process for each of them.

Thus, although within the same type of worker category there may be some distinction at firm level between different occupations and promotion structures, one should expect that the same economic forces operate on the demand for labour, and in general, the same institutional arrangements and hierarchical structures affect all job categories and skill levels within the same type. Hence a dominant job satisfaction determination pattern will prevail for all groups with similar promotion prospects and earnings hours or employment or educational attainments will affect the overall job satisfaction of career and non-career workers with differing intensities and significance.

IV THE DATA

A. Sample Size

Our data are taken from the first seven waves of the British Household Panel Study (BHPS), covering the period 1991 –1997. The sample includes 12,940 and 13,759 observations on 3,476 and 3,714 male and female respondents respectively. All respondents are full- or part-time, wage and salaried individuals, aged between 18 and 60 inclusive at the time of their interview.

First individuals were chosen on the basis that they had a valid personal interview in any of the seven waves. The reason simply being that BHPS contains also proxy interviews given on behalf of the respondent by another member of the household, or interviews conducted over the phone. In both these cases, the range of questions asked is limited and the answers less accurate. Second, in order to examine a fairly homogeneous sample currently self-employed individuals are excluded.

Finally in order to avoid confusion in the interpretation of the results, students were also excluded from the sample. In most cases, students tend to be employed in casual part-time jobs and receive casual payments or have non-taxable earnings. Moreover, their answers to questions regarding some of their personal and occupational characteristics may not truly reflect their ability, but simply indicate the fact that the job they currently hold is only seen by them as a means to financing an end, which is their human capital investment.

The sample was then split into those who possess promotion prospects in their current job and hence the possibility of following a career path and to those who do not. A description of the variables used can be found in the appendix. There are 9,109 and 8,786 observations on 1,986 and 1,949 male and female respondents respectively with promotion prospects and 3,831 and 4,973 observations on 874 and 1,137 male and female respondents respectively with no promotion prospects.

B. Description of Key Variables

The main variables of interest in this paper are those concerning actual and comparative wages, job satisfaction and promotion prospects. The wage is defined as gross hourly wage derived from monthly gross wages and salaries and using

information on the number of weekly hours of work. The comparative wage is defined in a similar manner. However, it is derived using a sample of 1,320,000 individuals from the corresponding seven-year period, 1991-1997, of the New Earnings Survey (NES) and calculated as a series of mean values over population subgroups sorted by age, gender, industrial classification and year.

The job satisfaction variable refers to an individual's overall job satisfaction and is derived from the response to the question 'All things considered, how satisfied or dissatisfied are you with your present job overall using a 1 - 7 scale?', with 1 being completely dissatisfied and 7 being completely satisfied. Seven other facets of job satisfaction with certain aspects of the job are also reported, which we discuss below.

Finally with respect to promotion prospects, individuals were asked if they had promotion prospects in their current job and if their current salary increased annually on an incremental scale. Those who replied yes to either question were classified as being employees with promotion prospects, or on a career path. All others formed the 'no promotion prospects' category of workers.

Previous empirical research into job satisfaction in the labour market has shown that women consistently report themselves as being more satisfied with their jobs than their male counterparts (Blanchflower and Oswald, 1992; Clark, 1996, 1997; Sloane and Williams, 2000). Given their previously reported disadvantaged position in the labour market with respect to their earnings (Wright and Ermish, 1991), promotion prospects (Lazear and Rosen, 1990) and firing risks (Riach and Rich, 1987) this study will also concentrate on the relationship between promotion prospects, job satisfaction and gender. All statistical results will therefore also be presented separately by gender in order to discover any differences in the way overall job satisfaction is determined for female and male employees with or without promotion and hence with or without career prospects.

C. Descriptive Statistics

To verify whether the split between promotion and non-promotion is an appropriate disaggregation, two non-parametric tests are used (Siegel, 1956). First the Mann-Whitney test, which tests whether the self-reported job satisfaction of carer and non-

career employees is from the same distribution, and second the Kolmogorov-Smirnov two-tailed test which tests whether the overall distribution of job satisfaction is the same in each case. The latter test is sensitive to any difference in the median, dispersion and skewness between the two distributions. Their values turned out to be 4.215 and 0.0820, implying that the job satisfaction distributions for the two types of workers are not the same.

Table 1 contains the characteristics of employees with and without promotion prospects by gender. The percentage of female workers is higher among those with no promotion prospects than it is among those with opportunities for advancement. In addition, gross hourly wages for employees with career prospects tend to concentrate largely in the three highest quintiles with females being a large minority at the top of the wage scale but over-represented at the bottom. On the other hand, the wages of over half of employees with no promotion prospects fall in the two lowest quintiles. In the latter category nearly 42 percent of female employees are in the lowest quintile compared to only 17 per cent of their male counterparts.

Employees with promotion prospects are more likely to be between 26 and 45 years of age, have permanent and full time jobs, work more hours, and have higher trade union coverage and or membership than their non-career counterparts. Female workers are under-represented in all of these categories but they seem to dominate the banking, finance and professional sector in which employees with career prospects are most likely to be found working. Although the gender balance is similar among workers with no promotion prospects, here female employees tend to dominate also in the distribution and services sector.

Furthermore, nearly half the sample of employees with promotion prospects have a university degree or equivalent, and only 13 percent have no educational qualifications at all, compared with 27 and 22 percent for employees with no career prospects respectively. In both cases men tend to dominate the highly educated end of the distribution for both categories of workers, while women are concentrated in the lowest, with the difference being more pronounced among employees with no promotion prospects.

Finally, while employees with career prospects are to be found primarily among those with a professional occupation, and/or in larger firms, the majority of those with no

promotion prospects are to be found in unskilled jobs and/or in small establishments. No major differences exist between the two sectors in terms of marriage, cohabitation and parenthood apart from the fact that female employees with promotion prospects are less likely to have children than their non-career counterparts.

Table 2 presents the reported means of overall job satisfaction along with its seven different facets by gender and type of employee. Overall reports of job satisfaction, as well as of its components, are significantly higher for employees who have promotion prospects in their current job, and may thus be considered to be on a career path, than their counterparts who lack such opportunities for advancement. Female employees seem to be more satisfied than male employees in both categories and the gender differential is significant in reports of all types of job satisfaction. Male employees with or without promotion prospects are most satisfied with job security, the opportunity to use their initiative and with the actual work that they undertake. While they are least satisfied with promotion prospects, pay, their relations with the boss and overall hours worked. Their female counterparts on the other hand are highly satisfied with most aspects of their jobs but less so with their promotion prospects and pay. In addition, female employees with no promotion prospects are reported to be more satisfied with their job security and hours of work than female employees with such prospects.

The distribution of overall job satisfaction by gender and type of employee is presented in table 3. The proportion of female employees with or without promotion prospects reported to be highly satisfied is higher than that of their male counterparts among the two categories of workers. While a larger proportion of men than women are also highly dissatisfied among the two types of workers. In addition, although male employees with promotion prospects are in their majority more highly satisfied than male workers who do not have such prospects, the percentage of the female employees with no promotion prospects who report themselves as completely satisfied (satisfaction level equal to 7) is higher than that of those female employees with such prospects. Considering the whole sample first, the results show that female employees are more satisfied than their male counterparts with all facets of job satisfaction.

To provide information about the correlations in the raw data, table 4 describes satisfaction levels in each sector and for different groups in the sample by gender. The

data demonstrate that both men and women are more satisfied when they have promotion prospects in their current job than when they do not, with women more so than men in both sectors. In fact female employees with promotion prospects in their current jobs seem to have the highest satisfaction levels among all categories of employees.

The effect for age is positive and stronger for older workers across all categories but with a mild U-shape for female workers with promotion prospects. Furthermore, workers with promotion prospects exhibit a higher level of overall job satisfaction across all wage quintiles. Interestingly, the highly educated employees, both men and women, with promotion prospects are less satisfied than those with medium qualifications, such as A-levels and O-levels or other qualification, who are in turn less satisfied than those with no qualifications at all. Again female employees are more satisfied than their male counterparts at all levels of education. The results for workers with no opportunities for promotion follow almost the same pattern, but they appear to be less satisfied than those with such opportunities at all educational levels of attainment, women more than men. Job satisfaction rises with the level of self-reported physical health for both types of employees and for women more than men.

In addition, as traditional economic theory would predict, hours of work are negatively correlated with satisfaction. However, although employees with promotion prospects, male and women, who work more than 60 hours are perhaps unexpectedly more satisfied than those who work between 40 and 60 hours, those with no such prospects display the opposite and more expected pattern. Again female satisfaction is the highest at the lowest and highest number of hours worked in both cases.

Finally there is a negative effect between establishment size and job satisfaction for both types of employees in both sectors while female employees with promotion prospects who are union members or work at an establishment with trade union coverage are more satisfied than all the other categories of workers. Female married or cohabiting workers with children who have promotion prospects follow the same pattern, while male employees with the same characteristics but no promotion prospects are the least satisfied with their jobs.

V MODEL SPECIFICATION AND ESTIMATION

It is a well-established fact that workers attempt to maximise their utility in terms of a wage income – leisure trade off. However, although increasing hours of work is most likely to decrease a person's utility, it may be an over-simplification to assume that a worker's utility depends solely his or her income and hours of work. Hamermesh (1977) and Borjas (1979) defined job satisfaction as a function of the individual's money wage and the monetary equivalent of the non-pecuniary aspects of the job. While Clark (1999) found evidence that wages and hours are amongst the least important characteristics of a job.

Following Clark and Oswald (1996), this can be thought of as a type of sub-utility function u , representing utility from working in an overall utility function

$$v = v(u(y, h, i, j), \mu) \quad (1)$$

where u is the utility from work and μ is utility from other sources and spheres of life, which is determined quite differently and can be expected to depend on factors such as the quality of family life, friendships, the individual's health and many personal non economic variables. The utility of working is then usually considered to be of the form:

$$u = u(y, h, i, j) \quad (2)$$

where y is income, h is hours of work, and i and j are sets of individual and job specific characteristics, respectively.

However, although neo-classical wage theory suggests that a worker's utility depends upon only his own absolute income and his own hours of work, one of the most prominent ideas in the psychology literature is the notion that happiness also depends on relative income. Hence, the relationship between pay and job satisfaction becomes more complex when a reference level of income, against which an individual compares himself or herself, is considered alongside the worker's absolute income.

Rees (1993) argued that there exists an inverse relationship between a worker's satisfaction and the wages of others and Baxter (1973 & 1993) formalised this idea as relative deprivation. In other words, when a worker's earnings fall relative to the wages of others, he or she feels relatively deprived and is less happy. Hence the new utility function includes an additional variable y^* which gives some idea of an individual's reference income.

$$\mathbf{u} = \mathbf{u}(\mathbf{y}, \mathbf{y}^*, \mathbf{h}, \mathbf{i}, \mathbf{j}) \quad (3)$$

Equation (2) therefore, assumes that utility is declining in the comparison pay level y^* and this captures the effect described in the socio-psychological literature as envy, jealousy or relative deprivation.

The influence of y^* is also examined in this study. This is ‘comparison income’ which can be thought as a reference level of income. The variable y^* is calculated here from a seven year period (1991-1997) of the New Earnings survey as a series of mean gross hourly wage values over population subgroups sorted by age gender industrial classification and year. For example the mean gross hourly wage of male employees, working in metal manufacturing, of age 45 in 1994 is assumed to be the comparison income y_k^* against which an individual k with similar characteristics from our sample compares his income between y_k in that year. One hypothesis is that the utility of person k depends on the gap between y_k and y_k^* .

In addition, where information on job satisfaction is presented on a rating scale, in our case 1 to 7, linearisation of the scales and estimation by OLS would fail to account for the ordinal nature of the dependent variable.⁶ Hence the model adopted in this paper, as in most recent studies, is the ordered probability model, known as the ordered probit (Zavoina and McElvey, 1975).⁷

We start by estimating an overall job satisfaction equation based on individual absolute and comparative gross hourly wages, hours of work and a vector of personal and job characteristics. Our approach was to estimate initially pooled ordered probit regressions for males and females with and without promotion prospects.

However, one potential bias when estimating the coefficients of pooled ordered probits might come from the existence of unobserved heterogeneity. That is, certain repeated levels of overall individual job satisfaction may be recorded because underlying unobservable individual characteristics, which vary across individuals may increase the probability that a certain level of job satisfaction is reported as opposed to another. One such example may be that depending on an underlying and continuously

⁶ If the responses are coded as 1,2,3,4,5,6 and 7, as it is the case with some of the job satisfaction variables encountered in the existing literature, then linear regression would treat the difference between a ‘2’ and a ‘3’ the same as that between a ‘6’ and a ‘7’, whereas in fact they are a ranking.

⁷ For a brief outline of the various alternative methods for analysing job satisfaction measured on ordinal scales see Sloane and Williams (1997).

changing emotional background, the influence of an individual's emotional state or 'mood' may influence positively or negatively his or her reported levels of job satisfaction at an interview irrespective of their job, industry or other personal characteristics. The correlation over time in reported levels of job satisfaction may then simply be due to the fact that this underlying 'mood swinging' is a random variable in the sample. This type of unobserved heterogeneity, or 'happiness proneness' explanation, is modelled here as a random effect that allows for variation in each individual's propensity for being happy in his or her job in a 7-year period.

To take this problem into consideration we took the panel nature of the data into account and re-estimated the job satisfaction equations using the random effects ordered probit estimation procedure.⁸ For details of the estimation technique see Rabe-Hesketh et al. (2000). Our main conclusions concerning the effect of wages, absolute and comparative, as well as other job and individual characteristics remain largely unaltered. In the following section we are therefore presenting the results from the panel estimation of the satisfaction equations using the ordered probit with random effects models.⁹

VI RESULTS

Initially to gain some idea how the different types of job satisfactions are correlated with overall job satisfaction we run ordered probit regressions of overall satisfaction on the other seven measures separately for employees with and without promotion or career prospects, with the independent variables entered as dummies (6, 7 = 1, 1-5 = 0). The results of this are presented in Table 5. The most important determinant of overall satisfaction is an individual's satisfaction with the work undertaken. All the other facets of job satisfaction are highly significant determinants of overall satisfaction. For employees with career prospects there is no significant difference between males and females in these rankings, but for those without such prospects the

⁸ Here a random effects specification is chosen because it implies that the individual specific effect is uncorrelated with the explanatory variables in the model. Although in many circumstances such correlations are indeed present, pointing thereby to the use of fixed effect model estimation procedures, in this case there are reasons to believe that the unobserved individual specific effects are independent from the regressors. There is no evidence to suggest that mood swings are constant during time or affect individuals who share the same personal or other characteristics. In addition the assumption that all those variables that we cannot observe do not vary over time is often hard to credit (Angrist and Kruger, 1998; Hamermesh, 1997).

⁹ The results from the pooled ordered probit regressions can be obtained from the authors on request.

gender variable is significant at the 5 % level. Further the gender interaction with pay relations with the boss, work itself is only significant for employees with promotion prospects, while the gender interaction on use of initiative is only significant for those without any such prospects. There are therefore important gender differences in the way in which facets of job satisfaction impact on overall job satisfaction. However the results confirm that overall job satisfaction measures can successfully capture many of the intrinsic and extrinsic aspects of job quality.

We start by estimating a job satisfaction equation based on standard personal, job and industrial characteristics. Following earlier analysis in the area the included variables are as follows. The effect of actual pay on job satisfaction is captured by the inclusion of the log of the individual's gross hourly wage. A measurement of comparative pay is also included to test whether the job satisfaction of both types of employees is actually influenced by their perceptions of salaries available for individuals who are employed in the same industrial sector over the same time period and are of similar age and gender. In line with utility maximisation analysis the log of an individual's total hours of work is also included to control a wage income-leisure trade-off.

Finally, a series of personal and job characteristics variable are included to variables are included for both men and women to catch any gender effect present in characteristics such as age, education, marital status, parenthood, health, travel to work time, house ownership as well as type and size of the working establishment trade union membership and coverage. Occupational, industrial affiliation and regional dummies are also included in all regressions.

The results of the random effects ordered probit analysis on the determinants of overall job satisfaction are given in Tables 6 and 7. Regressions were run separately for those employees with and without promotion prospects in their current job and for males and females within each type of employee.

A. RESULTS BY EMPLOYEE TYPE

The estimated coefficients of the determinants of overall satisfaction for both types of employees are shown in table 6 and indicate that in line with traditional utility maximisation theory the main variables display the correct signs. In both cases

absolute income is positively and significantly related to overall job satisfaction while hours of work display a negative sign. A U-shaped relationship between job satisfaction and age is also revealed for both type of workers.

The crosstabulation results between overall job satisfaction and individual characteristics did not provide any evidence to support the U-shaped relationship between age and job satisfaction. Nevertheless when other variables were controlled for in the regression such a relationship became strongly significant only for those employees who have promotion prospects in their current job. One explanation could be that employees with no promotion opportunities do not foresee the prospect of embarking upon a career path. Clark (1996), using the same dataset (BHPS) and exploring the same relationship concluded that the U-shape might be explained in terms of workers' changing job expectations over time.

Here the minima of these U-shapes are 32 and 23 for employees with and without promotion opportunities in their current jobs respectively. The latter implies that the overall job satisfaction of individuals with no promotion prospects in their current job begins to increase as early as at 23 years of age. Which it may in turn be interpreted as worker resignation from higher career aspirations due to possible entrapment in a bad job (Leontaridi, 2000). In contrast the finding for workers with promotion prospects in their job is closer to that of Clark (1996), which places the drop in satisfaction in the early thirties. Young workers may initially feel satisfied due to the novelty of their situation but later their job satisfaction drops as comparisons with colleagues begin and only to increase again when a successful career path has been established.

Previous work using the BHPS data has found strong correlations between job satisfaction and comparison income. Clark and Oswald (1996) measured such income by predicting econometrically a 'going rate' for the job while other studies included the pay of other workers in the same household (Clark 1995a), the pay that the respondent received in the past (Clark, 1995b) or the deserved pay derived from respondents' perceptions of equitable payments (Sloane and Williams, 2000; Ward and Sloane, 2000). This study included a comparison gross hourly wage created as an income cell-mean by age, gender, industrial classification and year of employment. The findings are very much in line with previous research, which revealed a negative correlation between an individual's overall job satisfaction and comparative income,

suggesting that the income comparisons are important determinants for the reported well-being of both types of workers. The presence or absence of the comparative income variable does not affect the actual income effect.

The descriptive statistics of the previous section showed that female employees reported the highest job satisfaction scores in both categories, while the distribution of those scores revealed that nearly 70 and 65 percent of women employees with and without promotion prospects respectively reported overall job satisfaction of 6 or 7, compared with just 57 and 46 percent of men in the same categories. Moreover, when other characteristics are controlled for in the regressions the gender 'male' dummy variable suggests that a very strong and significant negative coefficient for both employee types. This confirms that the gender effect is a general phenomenon and is not influenced by whether men and women are in career type jobs or not. It also emphasises the importance of splitting the sample by gender when considering job quality.

As far as other variables are concerned, the results of the effect of education on individuals' overall job satisfaction contain no surprises either. The negative effect of education on job satisfaction has been well documented in the literature. Better-educated workers appear to be less satisfied whether they have promotion opportunities, and hence a possibility for career advancement, or not. Marital status, parenthood and good health all appear to have a positive and significant effect on overall job satisfaction. While house owners appear to be less satisfied than renters only when their jobs involve opportunities for advancement. This is consistent with career workers taking out larger mortgages on the basis of future predicted earnings increases with the extra burden reducing their job satisfaction.

Increasing commuting time, trade union membership or coverage and employment in the private sector also lowers the overall job satisfaction for both employee types. The fact that the commuting time effect is stronger for those without promotion prospects may reflect the fact that mode of transport differs between the two sectors. The negative effects of trade unions is consistent with other studies but may reflect the impact of the quality of industrial relations on which we do not have data (see Bender and Sloane 1998). The lower level of job satisfaction in the private sector may reflect the less secure nature of work there relative to the public sector.

Finally the most satisfied workers are to be found at smaller establishments (Idson, 1990). This confirms with the findings in the psychological literature that morale is higher in smaller establishments.

B. RESULTS BY GENDER AND EMPLOYEE TYPE

Given the highly significant gender coefficient present in the previous results by employee type, we divided the sample further by gender in order to explore further the differences in job satisfaction among people on different career paths. Table 7 presents the results by employee type and gender from the random effect ordered probit regressions. Only results, which are different from our previous analysis, will be discussed in this section.

The first striking result is the relationship between job satisfaction, actual and comparative wages among the two genders. In particular, actual income seems to be strongly positively correlated with overall job satisfaction for male employees with and without promotion opportunities, while comparison income has a significant negative effect only on the job satisfaction of male employees with promotion prospects. In contrast, actual income has no significant effect on the overall job satisfaction of both types of female employees. Instead it is the comparative income against which the female employees in both categories measure themselves that is very strongly negatively correlated with their overall job satisfaction.

Hours of work do enter in the theoretically expected negative way for the whole sample of employees with and without promotion prospects. However, the variable has a statistically significant and negative effect only for women when the results are broken down by gender. In addition a very surprising finding is that total hours of work have a strong positive effect on the overall satisfaction of male employees with promotion prospects. Given the role that women play at home increased hours of work would imply less available time for leisure and housework. For career men these results point to a strong preference for income over leisure with the additional hours possibly designed to enhance the speed of movement up the career ladder.

The relationship between satisfaction and education (after controlling for absolute and comparison hourly earnings) is the same as before even when the results are presented by gender. Counter to what neo-classical economic theory might lead one to expect,

highly educated male and female employees with or without promotion prospects appear to be less content. Only male employees with no promotion prospects seem to be more satisfied when they have other educational qualifications rather than none. This will include craft-workers who may derive satisfaction from using their skills.

The weak U-shape relationship, which first appeared between age and job satisfaction among employees with no promotion prospects, has now become even more evident when the results are decomposed by gender. The minima of these U-shapes are now at ages 26 and 25 for men and women with no promotion prospects and 35 and 29 for men and women with such prospects.

Marriage or cohabitation has a negative but insignificant effect among male workers in both categories while the reverse holds for their female counterparts for whom marriage is significant. Similarly house ownership has a negatively significant effect only for those workers with promotion prospects.

The variable for a permanent job contract is insignificant for both types of male employees, perhaps reflecting the tendency for outsourcing for various types of professional skills. The flexibility of the work force has been a much discussed topic in industrial relations since the mid 1980s (See Atkinson, 1986; Hunter et al, 1993). In light of the establishment of a more flexible workforce, permanency at the workplace may be seen as a factor restricting employee advancement through possible job changes such as outsourcing (Topel and Ward, 1992). Moreover, given that male employees are on average more mobile than their female counterparts, it is not surprising that those females in permanent positions would be more satisfied (Clark, 1997). Being in the private sector does not significantly reduce the job satisfaction of men in the no promotions prospects sector, unlike the other groups. This is also true for those men who are not in a trade union. It may be that there are some men for whom less formal industrial relations situations are acceptable.

VII LOW PAY AND HIGHER PAID JOB SATISFACTION

The career / non-career split does not produce a non-career segment that is clearly low paid. Hence, we have repeated the above exercise by splitting the sample into those earning less than two-thirds of median earnings and compared this segment with the remaining employees in the sample. In 1997, 21.66% of the sample earned less than

two-thirds of the median representing a wage of £4.20 (as opposed to the median of £6.30). This represented 6.76% of males and 14.90% of females. However, the low paid group had higher overall job satisfaction than the remainder, 5.54 for all employees as opposed to 5.36 for the rest. Again, however, there were contrasting results by gender with higher paid men having higher job satisfaction than lower paid men in contrast to the situation for women and all workers combined.

The distributions are bimodal with a higher proportion of low paid workers of both genders claiming the highest level of job satisfaction, but the same being true for the lowest ranking¹⁰.

When the regression is re-run attempting to explain overall job satisfaction in terms of its facets (table 8) results similar to the career / non-career split are obtained with all facets being highly significant and the nature of work itself dominating. Again there is no gender difference as far as the lower ranked segment is concerned, but gender is significant in the higher ranked segment, where all the gender interaction terms are significant unlike the earlier split, but only two of the interaction terms in the lower ranked segment as opposed to four in the earlier split are significant.

The random effects ordered probit results are shown in Table 9. This reveals that the log of hourly wage is negative and significant for the low wage segment though it is significant and positive as expected for the higher segment¹¹. The other variables in the main behave in the same way. In order to cast more light on the present perverse result for the log of absolute pay in the low pay regression the sample has split by gender (Table 10). For men, the sign on the absolute pay variable in the low pay sector is positive, but insignificant. For women, the negative sign and its significance remains. Comparison pay is insignificant in the low pay sector for both men and women. The affect of marriage and children and travel to work time is generally more important for women, at least in the low pay sector. In general, these results are consistent with men's job satisfaction being driven much more by pecuniary aspects of the job, but those women who value pay more than their colleagues tend to earn

¹⁰ The detailed results are not reported here for reasons of space.

¹¹ Chi-squared tests were conducted for the equality of the coefficients on the y and y^* variables. The null hypothesis is that $y+y^*=0$. Of the six categories of low paid or higher paid men, women and all workers, five pass the test and in the other case where the null is accepted, the coefficients are not significant.

more, but not sufficient to escape from the low paid sector where they do not desire to be. To cast more light on this hypothesis we examine job mobility below.

VIII MOBILITY STATISTICS

For the whole sample there are 26,699 observations on a panel of 7,190 individuals over a period of seven years from 1991 to 1997. During this period 2,328 job changes occurred, including movements either from low pay to high pay or the reverse. There were slightly more movements from low pay to higher pay (1,297) than from higher pay to low pay (1,031). Given the nature of the sample it is possible for an individual not to move at all or to make multiple moves from one state to another. In practice, of these individuals moving from low pay to higher paid jobs, 88.13% made one such move, 11.18% two moves and 0.69% three moves. Similarly, 87.49% of those who moved from higher paid to low paid jobs made a single such move compared to 11.93% who made two moves and 0.58% who made three moves.

We are particularly interested to see what happens to job satisfaction when such moves occur and the extent to which job satisfaction responses remain stable when no such movement occurs. In fact 33.32% of those moving from lower paid to higher paid jobs report an increase in job satisfaction, but 25.70% report a reduction in job satisfaction. The latter could be explained by a movement of job, increasing job insecurity or perhaps the more demanding nature of a higher paid job more than offsetting the increased financial compensation. For women, the proportion expressing a reduction in job satisfaction when moving from a low paid job to a high paid job is less than that of men (24.23% compared to 28.94%), but only 32.19% of women as opposed to 35.36% of men express an increase in job satisfaction following such a move.

Turning to job moves from higher pay to low pay jobs, 40.35% claim a reduction in job satisfaction, but 37.93% claim an increase in job satisfaction. When the sample is split by gender, 47.47% of men claim that their job satisfaction has fallen, but 34.41% that it has risen, while in the case of women, more claim that it has risen (39.93%) than that it has fallen (36.29%). This is consistent with pay being more critical to men

than to women in determining their job satisfaction, but also indicating that pay is but only one of a number of facets of job satisfaction.

In order to examine further this process of movement transition matrices were constructed (Table 11) on the basis of an overall job satisfaction dummy with one representing job satisfaction levels 5 to 7 and zero levels 1 to 4. For the whole sample Table 11(a), which pools the years 1991 to 1997 compares year t status with that in year t-1 using four categories – low paid and satisfied, low paid and dissatisfied, higher paid and satisfied and higher paid and dissatisfied. Thus, as shown in row 1, column 1 of those low paid and satisfied in year t-1, 65.57% remain satisfied and low paid in year t, but as shown in the rest of row 1, 7.75% become dissatisfied, 27.14% move into a higher paid job and become satisfied while a further 3.54% move into a higher paid job, but remain dissatisfied. Comparing men and women in 11(b) and 11(c), we see that men are more likely than women to become satisfied after a move from a low paid to a higher paid job.

Again, this is consistent with non-pecuniary elements of work being more important to women and pecuniary elements more important to men.

IX CONCLUSIONS

This paper has attempted to measure job quality in terms of the assessment by workers of their job satisfaction as measured on a seven-point scale. Distinguishing between employees with promotion, and hence career prospects, and those without, as defined by the individual respondents, we find that job satisfaction is higher for the former than for the latter. It is also higher for women than for men in each of these categories, but the determinants of job satisfaction are different for men and for women. In particular, absolute pay matters more for men and comparative pay more for women. If we are to improve the quality of jobs, therefore, it is important to understand that different approaches are required for each gender.

We also split the sample into low pay (hourly earnings, less than two thirds of the median) and higher pay categories, since the non-career segment contains some well paid jobs. Surprisingly, however, there is no clear evidence that higher paid workers have higher job satisfaction than low paid workers and this is especially the case for

women. This seems more in accord with the compensating differentials than the good jobs and bad jobs stories. It also emphasises the point that pay is not everything.

These implications are reinforced when we consider job mobility from low paid to higher paid jobs and vice-versa. It is by no means always the case that moving from a low paid to a higher paid job leads to an increase in job satisfaction. This strengthens the argument for considering the quality of jobs in terms of career and non-career markets.

Table 1: Characteristics of employees by type and gender

| Characteristics (%) | Promotion prospects | | | No promotion prospects | | |
|--|---------------------|-------|--------|------------------------|-------|--------|
| | All | Male | Female | All | Male | Female |
| Males | 50.9 | ~~~ | ~~~ | 43.51 | ~~~ | ~~~ |
| Females | 49.1 | ~~~ | ~~~ | 56.49 | ~~~ | ~~~ |
| Age 18 - 25 | 18.84 | 19.23 | 18.44 | 15.23 | 16.6 | 14.18 |
| Age 26 - 35 | 32.41 | 33.19 | 31.61 | 27.54 | 29.44 | 26.08 |
| Age 36 - 45 | 26.52 | 26.47 | 26.56 | 26.14 | 24.35 | 27.51 |
| Age 46 - 55 | 18.73 | 17.46 | 20.04 | 23.57 | 21.95 | 24.81 |
| Age 56 - 60 | 3.50 | 3.66 | 3.35 | 7.52 | 7.65 | 7.42 |
| Hourly wage: lowest quantile | 14.65 | 9.18 | 20.32 | 30.88 | 16.73 | 41.79 |
| Hourly wage: second quantile | 17.93 | 15.48 | 20.46 | 24.22 | 23.10 | 25.08 |
| Hourly wage: third quantile | 20.58 | 19.24 | 21.97 | 18.82 | 21.64 | 16.65 |
| Hourly wage: fourth quantile | 22.86 | 25.45 | 20.17 | 14.20 | 19.55 | 10.07 |
| Hourly wage: highest quantile | 23.99 | 30.65 | 17.08 | 11.88 | 18.98 | 6.41 |
| University degree (post grad & first or equiv) | 39.82 | 44.19 | 35.28 | 27.12 | 34.27 | 21.62 |
| A levels plus nursing | 15.88 | 15.70 | 16.06 | 13.82 | 14.51 | 13.29 |
| O levels | 22.78 | 19.67 | 26.00 | 24.78 | 21.43 | 27.37 |
| Other qualifications | 8.52 | 8.07 | 8.99 | 11.27 | 9.45 | 12.67 |
| No education | 12.69 | 12.06 | 13.34 | 22.40 | 19.58 | 24.57 |
| Good health | 80.93 | 82.89 | 78.90 | 77.71 | 79.27 | 76.51 |
| Fair health | 15.02 | 14.10 | 15.97 | 17.37 | 16.37 | 18.14 |
| Poor health | 4.04 | 3.00 | 5.12 | 4.87 | 4.31 | 5.31 |
| Trade union coverage at workplace | 60.93 | 58.85 | 63.08 | 29.93 | 33.54 | 27.15 |
| Trade union cover and membership at work | 43.30 | 44.38 | 42.17 | 21.58 | 27.83 | 16.77 |
| Trade union member | 45.27 | 46.74 | 43.74 | 23.36 | 30.51 | 17.86 |
| Permanent job | 95.51 | 96.60 | 94.38 | 89.48 | 90.13 | 88.98 |
| Temporary job | 4.49 | 3.40 | 5.62 | 10.52 | 9.87 | 11.02 |
| Public sector | 34.17 | 25.71 | 42.94 | 14.87 | 9.34 | 19.12 |
| Private sector | 62.03 | 71.12 | 52.62 | 79.92 | 87.71 | 73.92 |
| Weekly hours worked: 0-23 | 10.61 | 1.02 | 20.54 | 24.74 | 3.39 | 41.18 |
| Weekly hours worked: 24-29 | 4.22 | 0.78 | 7.80 | 5.43 | 1.25 | 8.65 |
| Weekly hours worked: 30 - 39 | 46.80 | 42.28 | 51.48 | 32.56 | 32.11 | 32.92 |
| Weekly hours worked: 40 - 60 | 35.95 | 51.78 | 19.54 | 35.17 | 59.28 | 16.59 |
| Weekly hours worked: 60 - or more | 2.42 | 4.14 | 0.64 | 2.10 | 3.97 | 0.66 |
| Workplace size:1-24 | 25.69 | 20.86 | 30.70 | 47.04 | 40.98 | 51.7 |
| Workplace size: 25 - 99 | 27.10 | 26.47 | 27.76 | 25.26 | 26.47 | 24.33 |
| Workplace size: 100 - 499 | 26.50 | 30.01 | 22.87 | 18.30 | 20.99 | 16.23 |
| Workplace size: 500 plus | 20.47 | 22.40 | 18.48 | 9.20 | 11.43 | 7.48 |
| Agriculture, forestry, fishing | 0.58 | 0.81 | 0.33 | 1.94 | 3 | 1.13 |
| Energy and manufacturing | 23.59 | 34.90 | 11.87 | 28.35 | 40.59 | 18.92 |
| Construction,distribution,transport,services | 32.51 | 30.72 | 34.37 | 42.04 | 36.83 | 46.05 |
| Banking and finance& professional | 43.21 | 33.45 | 53.33 | 27.58 | 19.58 | 33.74 |
| London inner & outer | 10.65 | 10.28 | 11.03 | 9.00 | 8.69 | 9.23 |
| Southeast southwest and East Anglia | 32.06 | 33.09 | 30.99 | 33.33 | 31.66 | 34.61 |
| North | 26.50 | 26.26 | 26.76 | 25.77 | 27.54 | 24.41 |
| Midlands | 16.46 | 17.24 | 15.66 | 18.73 | 18.72 | 18.74 |
| Wales | 4.64 | 4.65 | 4.63 | 5.33 | 6.03 | 4.79 |
| Scotland | 9.68 | 8.49 | 10.93 | 7.83 | 7.33 | 8.2 |
| Professional occupation | 41.36 | 42.94 | 39.73 | 23.67 | 30.49 | 18.42 |
| Skilled non manual | 26.97 | 16.25 | 38.09 | 26.59 | 9.14 | 40.04 |
| Skilled manual | 17.16 | 26.61 | 7.35 | 22.86 | 39.21 | 10.28 |
| Unskilled, partly skilled | 14.46 | 14.13 | 14.81 | 26.87 | 21.17 | 31.27 |
| Own a house/flat | 81.42 | 81.59 | 81.25 | 75.28 | 75.02 | 75.49 |
| Have a child(ren) | 39.39 | 41.96 | 36.72 | 40.00 | 37.09 | 42.25 |
| Married/cohabiting | 72.54 | 72.52 | 72.56 | 74.08 | 72.57 | 75.25 |

Table 2 Means of satisfaction by satisfaction category type of worker and gender

| Satisfaction level | Promotion prospects | | | No promotion prospects | | |
|---------------------------------------|---------------------|------------------|------------------|------------------------|-----------------|-----------------|
| | | male | female | | male | female |
| Overall job satisfaction | 5.46 (0.009) | 5.31 (0.014) | 5.61 (0.013) | 5.26 (0.016) | 4.90 (0.025) | 5.54 (0.020) |
| Job satisfaction: promotion prospects | 4.60 (0.013) | 4.54 (0.018) | 4.67 (0.019) | 3.95 (0.024) | 3.60 (0.034) | 4.24 (0.033) |
| Job satisfaction: total pay | 4.71 (0.012) | 4.61 (0.0160) | 4.81 (0.17) | 4.39 (0.019) | 4.09 (0.029) | 4.62 (0.025) |
| Job satisfaction: job security | 5.54 (0.011) | 5.44 (0.015) | 5.65 (0.0150) | 5.51 (0.017) | 5.17 (0.027) | 5.76 (0.021) |
| Job satisfaction: relations with boss | 5.22 (0.012) | 5.09 (0.017) | 5.35 (0.017) | 5.04 (0.019) | 4.68 (0.030) | 5.31 (0.024) |
| Job satisfaction: initiative | 5.78 (0.009) | 5.75 (0.014) | 5.82 (0.013) | 5.63 (0.016) | 5.50 (0.025) | 5.74 (0.021) |
| Job satisfaction: work itself | 5.57 (0.009) | 5.48 (0.014) | 5.67 (0.014) | 5.44 (0.016) | 5.24 (0.025) | 5.60 (0.020) |
| Job satisfaction: hours worked | 5.22 (0.011) | 5.07 (0.015) | 5.39 (0.015) | 5.17 (0.017) | 4.75 (0.027) | 5.49 (0.022) |



Table 4 Mean reported job satisfaction levels

| Characteristics | Promotion prospects | | No promotion prospects | | |
|------------------------------------|---------------------|---------------|------------------------|--------------|---------------|
| | male | female | male | female | |
| Males | 5.31 (0.014) | | | 4.90 (0.025) | |
| Females | 5.61 (0.013) | | | 5.54 (0.020) | |
| Age 18 - 25 | 5.42 (0.022) | 5.29 (0.031) | 5.56 (0.031) | 4.99 (0.042) | 4.78 (0.062) |
| Age 26 - 35 | 5.42 (0.017) | 5.32 (0.024) | 5.52 (0.023) | 5.14 (0.032) | 4.82 90.0460 |
| Age 36 - 45 | 5.45 (0.019) | 5.28 (0.027) | 5.62 (0.026) | 5.30 (0.032) | 4.88 (0.051) |
| Age 46 - 55 | 5.53 (0.023) | 5.30 (0.033) | 5.73 (0.029) | 5.42 (0.033) | 5.04 (0.053) |
| Age 56 - 60 | 5.76 90.052) | 5.59 (0.074) | 5.95 (0.071) | 5.64 (0.054) | 5.22 (0.090) |
| Hourly wage: lowest quantile | 5.66 (0.025) | 5.37 (0.049) | 5.80 (0.029) | 5.43 (0.029) | 4.82 90.066) |
| Hourly wage: second quantile | 5.49 (0.024) | 5.23 (0.038) | 5.68 (0.029) | 5.23 (0.033) | 4.72 90.055) |
| Hourly wage: third quantile | 5.41 (0.022) | 5.19 (0.035) | 5.60 (0.028) | 5.17 (0.038) | 4.91 (0.055) |
| Hourly wage: fourth quantile | 5.39 (0.020) | 5.31 (0.027) | 5.48 (0.029) | 5.10 (0.041) | 4.98 (0.051) |
| Hourly wage: highest quantile | 5.42 (0.018) | 5.40 (0.021) | 5.46 (0.031) | 5.21 (0.018) | 5.10 (0.0520) |
| University degree (postgrad et al) | 5.37 (0.015) | 5.29 (0.020) | 5.46 (0.022) | 5.04 (0.032) | 4.86 (0.043) |
| A levels plus nursing | 5.39 (0.023) | 5.20 (0.033) | 5.58 (0.031) | 5.08 (0.044) | 4.77 (0.062) |
| O levels | 5.48 (0.020) | 5.28 (0.032) | 5.62 (0.026) | 5.35 (0.032) | 4.92 (0.054) |
| Other qualifications | 5.61 (0.033) | 5.40 (0.051) | 5.80 (0.041) | 5.41 (0.047) | 5.10 (0.083) |
| No education | 5.70 (0.029) | 5.50 (0.043) | 5.89 (0.038) | 5.46 (0.035) | 4.93 (0.059) |
| Good health | 5.50 (0.011) | 5.37 (0.015) | 5.65 (0.014) | 5.33 (0.018) | 4.97 (0.027) |
| Fair health | 5.29 (0.026) | 5.06 (0.067) | 5.51 (0.034) | 5.02 (0.026) | 4.58 (0.065) |
| Poor health | 5.15 (0.057) | 4.79 (0.096) | 5.36 (0.070) | 5.09 (0.085) | 4.78 (0.125) |
| Trade union coverage at work | 5.40 (0.012) | 5.24 (0.019) | 5.55 (0.017) | 5.07 (0.030) | 4.76 (0.044) |
| Trade union cover and member | 5.37 (0.015) | 5.23 (0.022) | 5.51 (0.021) | 4.97 (0.037) | 4.77 (0.048) |
| Trade union member | 5.37 (0.015) | 5.23 (0.021) | 5.51 (0.020) | 4.98 (0.036) | 4.78 (0.047) |
| Permanent job | 5.46 (0.009) | 5.31 (0.014) | 5.62 (0.014) | 5.28 (0.017) | 4.93 (0.0260) |
| Temporary job | 5.36 (0.048) | 5.17 (0.080) | 5.49 (0.059) | 5.05 (0.053) | 4.68 (0.088) |
| Public sector | 5.47 (0.016) | 5.27 (0.028) | 5.59 (0.016) | 5.42 (0.041) | 4.72 (0.086) |
| Private sector | 5.44 (0.012) | 5.32 (0.016) | 5.61 (0.018) | 5.20 (0.018) | 4.91 (0.027) |
| Weekly hours worked: 0-23 | 5.82 (0.027) | 5.27 (0.159) | 5.84 (0.027) | 5.90 (0.026) | 5.33 (0.127) |
| Weekly hours worked: 24-29 | 5.78 (0.043) | 5.50 (0.163) | 5.81 (0.044) | 5.50 (0.068) | 4.89 (0.219) |
| Weekly hours worked: 30 - 39 | 5.40 (0.014) | 5.26 (0.021) | 5.52 (0.019) | 5.07 (0.030) | 4.81 (0.045) |
| Weekly hours worked: 40 - 60 | 5.38 (0.017) | 5.33 (0.019) | 5.51 (0.031) | 4.99 (0.028) | 4.94 (0.032) |
| Weekly hours worked: 60 + | 5.49 (0.064) | 5.46 (0.070) | 5.71 (0.145) | 4.74 (0.130) | 4.69 (0.137) |
| Workplace size:1-24 | 5.64 (0.018) | 5.44 (0.030) | 5.78 (0.023) | 5.50 (0.022) | 5.10 (0.038) |
| Workplace size: 25 - 99 | 5.47 (0.018) | 5.31 (0.027) | 5.62 (0.025) | 5.23 (0.032) | 4.85 (0.048) |
| Workplace size: 100 - 499 | 5.36 (0.019) | 5.31 (0.025) | 5.44 (0.029) | 4.83 (0.040) | 4.65 (0.056) |
| Workplace size: 500 plus | 5.33 (0.021) | 5.19 (0.030) | 5.51 (0.031) | 4.96 (0.056) | 4.77 (0.075) |
| Agriculture, forestry, fishing | 5.85 (0.118) | 6.04 (0.128) | 5.37 (0.245) | 5.48 (0.096) | 5.40 (0.118) |
| Energy and manufacturing | 5.36 (0.020) | 5.32 (0.023) | 5.48 (0.041) | 5.00 (0.031) | 4.83 (0.039) |
| Construction,distribution,transpor | 5.54 (0.017) | 5.32 (0.026) | 5.74 (0.022) | 5.38 (0.025) | 4.93 (0.042) |
| Banking and finance& profession | 5.44 (0.014) | 5.27 (0.024) | 5.56 (0.018) | 5.34 (0.030) | 4.91 (0.055) |
| London inner & outer | 5.30 (0.031) | 5.09 (0.046) | 5.50 (0.042) | 5.04 (0.057) | 4.77 (0.083) |
| Southeast southwest & E.Anglia | 5.49 (0.017) | 5.34 (0.024) | 5.65 (0.023) | 5.30 (0.027) | 4.84 (0.044) |
| North | 5.49 (0.019) | 5.34 (0.027) | 5.63 (0.026) | 5.28 (0.032) | 4.93 (0.049) |
| Midlands | 5.50 (0.023) | 5.34 (0.032) | 5.68 (0.032) | 5.34 (0.036) | 4.99 (0.054) |
| Wales | 5.48 (0.046) | 5.36 (0.064) | 5.59 (0.066) | 5.29 (0.072) | 5.22 (0.096) |
| Scotland | 5.38 (0.031) | 5.28 (0.048) | 5.45 (0.041) | 5.09 (0.096) | 4.72 (0.105) |
| Professional occupation | 5.46 (0.014) | 5.38 (0.019) | 5.55 (0.020) | 5.30 (0.030) | 5.16 (0.041) |
| Skilled non manual | 5.49 (0.019) | 5.23 (0.036) | 5.59 (0.021) | 5.38 (0.031) | 4.69 (0.088) |
| Skilled manual | 5.41 (0.025) | 5.32 (0.028) | 5.78 (0.047) | 5.04 (0.034) | 4.86 (0.039) |
| Unskilled, partly skilled | 5.45 (0.028) | 5.17 (0.041) | 5.73 (0.037) | 5.31 (0.033) | 4.71 (0.059) |
| Own a house/flat | 5.44 (0.011) | 5.28 (0.016) | 5.59 (0.14) | 5.26 (0.018) | 4.89 (0.029) |
| Have a child(ren) | 5.53 (0.015) | 5.35 (0.021) | 5.74 (0.020) | 5.39 (0.024) | 4.91 (0.041) |
| Married/cohabiting | 5.49 (0.011) | 5.32 (0.016) | 5.66 (0.015) | 5.32 (0.019) | 4.92 (0.029) |

Table 5 Ordered Probit Regression: Dependent Variable overall Job Satisfaction: independent variables facets of job satisfaction (measured as dummies, 6-7 = 1, 1-5 = 0)

| Facet of Job Satisfaction | Promotion prospects | No promotion prospects |
|-----------------------------------|---------------------|------------------------|
| | Coefficient (t) | Coefficient (t) |
| 1. Promotion | 0.353*** (13.94) | 0.258***(6.99) |
| 2. Pay | 0.369***(14.71) | 0.535***(15.68) |
| 3. Boss | 0.661***(21.80) | 0.749***(18.58) |
| 4. Job Security | 0.388***(13.94) | 0.484***(13.84) |
| 5. Use of Initiative | 0.556***(16.39) | 0.536***(12.30) |
| 6. Work Itself | 1.301***(40.43) | 1.109***(27.99) |
| 7. Hours Worked | 0.742***(25.61) | 0.682***(18.57) |
| Gender | 0.001 (0.01) | 0.170***(2.52) |
| Gender/Satisfaction Interaction 1 | 0.120***(3.36) | 0.126***(2.21) |
| Gender/Satisfaction Interaction 2 | 0.113***(3.13) | -0.002 (-0.29) |
| Gender/Satisfaction Interaction 3 | -0.144***(-3.36) | -0.277***(-4.89) |
| Gender/Satisfaction Interaction 4 | 0.145***(3.80) | 0.041 (0.80) |
| Gender/Satisfaction Interaction 5 | -0.074(-1.51) | -0.159***(-2.39) |
| Gender/Satisfaction Interaction 6 | -0.199***(-4.49) | -0.113*(-1.93) |
| Gender/Satisfaction Interaction 7 | -0.168***(-4.24) | -0.124***(-2.356) |
| Cut 1 | -0.570 | -0.528 |
| Cut 2 | 1.390 | 1.254 |
| Cut 3 | 2.037 | 1.905 |
| Cut 4 | 3.159 | 2.837 |
| Cut 5 | 4.882 | 4.348 |
| No of Observations | 17,895 | 8,804 |
| Log of likelihood functions | -21546.94 | -11,513.87 |

*** Statistically significant at the 0.01 level
 ** Statistically significant at the 0.05 level
 * Statistically significant at the 0.10 level

**Table 6: Random effects ordered probit overall job satisfaction equations
(t-statistics in parentheses)**

| | Promotion prospects | No promotion prospects |
|--------------------------------------|----------------------------|-------------------------------|
| Log hourly wage | 0.054 (2.395) | 0.072 (2.655) |
| Log comparison wage | -0.329 (-6.200) | -0.257 (-3.397) |
| Log hours | -0.130 (-5.161) | -0.285 (-11.416) |
| Higher education | -0.372 (-12.616) | -0.312 (-8.390) |
| A levels & nursing | -0.376 (-11.217) | -0.285 (-6.584) |
| O levels & equivalent | -0.253 (-8.753) | -0.099 (-2.851) |
| Other qualifications | -0.139 (-4.100) | -0.042 (-0.964) |
| Gender | -0.141 (-5.174) | -0.233 (-5.622) |
| Age | -0.019 (-2.557) | -0.017 (-1.765) |
| Age squared | 0.000 (3.495) | 0.000 (3.147) |
| Married | 0.082 (3.943) | 0.065 (2.181) |
| Children dummy | 0.124 (6.316) | 0.099 (3.611) |
| Good health | 0.225 (10.511) | 0.236 (8.475) |
| House owner | -0.157 (-6.862) | -0.049 (-1.701) |
| Travel to work time | -0.001 (-3.504) | -0.003 (-4.848) |
| Trade union cover | -0.092 (-4.155) | -0.130 (-3.811) |
| Trade union member | -0.099 (-4.790) | -0.104 (-3.105) |
| Permanent job | 0.135 (3.437) | 0.140 (3.719) |
| Private sector | -0.087 (-3.558) | -0.198 (-5.303) |
| Size 25 - 99 | -0.120 (-5.389) | -0.095 (-3.199) |
| Size 100 - 499 | -0.173 (-7.325) | -0.308 (-8.918) |
| Size 500 plus | -0.176 (-6.599) | -0.167 (-3.513) |
| Occupn & industry dummies | yes | yes |
| Regional dummies | yes | yes |
| Mu (1) | 0.422 | 0.398 |
| Mu (2) | 1.002 | 0.920 |
| Mu (3) | 1.424 | 1.349 |
| Mu (4) | 2.182 | 1.981 |
| Mu (5) | 3.633 | 3.226 |
| Log-likelihood | -25859.37 | -13739 |
| Number of observations | 17,895 | 8,804 |

**Table 7: Random effects ordered probit overall job satisfaction equations by gender
(t-statistics in parentheses)**

| | Promotion prospects | | No promotion prospects | |
|----------------------------------|---------------------|--------------------|------------------------|--------------------|
| | male | female | male | female |
| Log hourly wage | 0.265 (7.861) | -0.040 (-1.188) | 0.164 (3.785) | 0.050 (1.430) |
| Log comparison wage | -0.243 (-2.215) | -0.429 (-4.826) | -0.124 (-0.732) | -0.414 (-3.509) |
| Log hours | 0.310 (5.187) | -0.165 (-5.243) | -0.087 (-1.441) | -0.271 (-9.016) |
| Higher education | -0.367 (-9.166) | -0.389 (-8.983) | -0.225 (-4.092) | -0.343 (-6.499) |
| A levels & nursing | -0.451 (-9.771) | -0.307 (-6.495) | -0.188 (-2.807) | -0.276 (-4.844) |
| O levels & equivalent | -0.298 (-7.164) | -0.245 (-6.194) | -0.033 (-0.582) | -0.099 (-2.101) |
| Other qualifications | -0.161 (-3.313) | -0.107 (-2.226) | 0.141 (2.045) | -0.134 (-2.480) |
| Age | -0.028 (-1.886) | -0.022 (-2.055) | -0.031 (-1.417) | -0.021 (-1.546) |
| Age squared | 0.000 (2.313) | 0.000 (2.642) | 0.001 (2.152) | 0.000 (2.398) |
| Married | -0.038 (-1.174) | 0.121 (4.362) | -0.058 (-1.256) | 0.151 (3.798) |
| Children dummy | 0.068 (2.565) | 0.158 (5.597) | 0.069 (1.682) | 0.164 (4.311) |
| Good health | 0.284 (8.903) | 0.193 (6.772) | 0.228 (5.224) | 0.215 (5.661) |
| House owner | -0.188 (-5.919) | -0.160 (-4.999) | -0.069 (-1.616) | -0.056 (-1.426) |
| Travel to work time | -0.001 (-1.720) | -0.002 (-2.551) | -0.002 (-3.642) | -0.003 (-2.447) |
| Trade union cover | -0.077 (-2.438) | -0.108 (-3.291) | -0.098 (-2.024) | -0.153 (-3.306) |
| Trade union member | -0.075 (-2.568) | -0.117 (-3.873) | -0.060 (-1.298) | -0.159 (-3.124) |
| Permanent job | 0.000 (0.005) | 0.153 (2.908) | 0.019 (0.331) | 0.217 (4.155) |
| Private sector | -0.103 (-2.954) | -0.087 (-2.511) | -0.055 (-0.833) | -0.273 (-5.546) |
| Size 25 - 99 | -0.115 (-3.461) | -0.112 (-3.653) | -0.112 (-2.355) | -0.457 (-1.132) |
| Size 100 - 499 | -0.140 (-4.196) | -0.219 (-6.276) | -0.290 (-5.337) | -0.346 (-7.109) |
| Size 500 plus | -0.205 (-5.532) | -0.132 (-3.303) | -0.162 (-2.317) | -0.146 (-1.964) |
| Occupational dummies | yes | yes | yes | yes |
| Industry dummies | yes | yes | yes | yes |
| Regional dummies | yes | yes | yes | yes |
| Mu (1) | 0.432 | 0.399 | 0.434 | 0.362 |
| Mu (2) | 1.018 | 0.962 | 1.019 | 0.813 |
| Mu (3) | 1.485 | 1.322 | 1.497 | 1.188 |
| Mu (4) | 2.254 | 2.065 | 2.155 | 1.796 |
| Mu (5) | 3.300 | 3.503 | 3.393 | 3.051 |
| Log-likelihood | -13621.66 | -12185.39 | -6394.117 | -7277.311 |
| Number of observations | 9,109 | 8,786 | 3,831 | 4,973 |

**Table 8: Ordered Probit Regression: Dependent Variable Overall Job Satisfaction: Independent Variables
Facets of Job Satisfaction (measured as dummies 6-7=1, 1-5=0)**

| Facet of Job Satisfaction | Low Pay Coefficient | Higher Pay Coefficient |
|--|--------------------------------|-----------------------------------|
| Promotion | 0.268*** (7.13) | 0.324*** (13.01) |
| Pay | 0.570*** (15.24) | 0.406*** (16.14) |
| Boss | 0.610*** (12.46) | 0.722*** (24.46) |
| Job Security | 0.356*** (8.62) | 0.430*** (16.31) |
| Use of Initiative | 0.470*** (9.04) | 0.626*** (18.71) |
| Work Itself | 1.104*** (24.37) | 1.265*** (40.91) |
| Hours Worked | 0.718*** (17.04) | 0.721*** (25.49) |
| Gender | 0.002 (0.02) | 0.108** (2.17) |
| Gender / Satisfaction Interaction 1 | 0.145** (1.96) | 0.130*** (3.89) |
| Gender / Satisfaction Interaction 2 | 0.144 (0.20) | 0.102*** (2.94) |
| Gender / Satisfaction Interaction 3 | -0.195** (-2.34) | -0.203*** (-5.32) |
| Gender / Satisfaction Interaction 4 | 0.127 (1.60) | 0.120*** (3.46) |
| Gender / Satisfaction Interaction 5 | -0.717 (-0.73) | -0.164*** (-3.60) |
| Gender Satisfaction Information 6 | -0.136 (-1.63) | -0.167*** (-4.15) |
| Gender Satisfaction Information 7 | -0.120 (-1.62) | -0.140*** (-3.75) |
| Cut 1 | 0.439 | 0.594 |
| Cut 2 | 1.058 | 1.426 |
| Cut 3 | 1.731 | 2.077 |
| Cut 4 | 2.665 | 3.185 |
| Cut 5 | 4.135 | 4.932 |
| No. of observations | 5829 | 20870 |
| log of Likelihood | -7290.38 | -25624.87 |

*** Statistically significant at the 0.01 level

** Statistically significant at the 0.05 level

* Statistically significant at the 0.10 level

t Statistics in parenthesis

Table 9: Random Effects Ordered Probit Overall Job Satisfaction Equations

| | Higher Paid Coefficient | Low Paid Coefficient |
|--|------------------------------------|---------------------------------|
| Constant | 3.463*** (21.45) | 3.749*** (15.43) |
| Log hourly wage | 0.144*** (6.37) | 0.123** (-2.47) |
| Log comparison wage | -0.288*** (6.38) | -0.166** (-2.32) |
| Log hours | -0.177*** (-8.17) | -0.175*** (-5.86) |
| Higher education | -0.249*** (-9.23) | -0.367*** (-7.80) |
| A levels and nursing | -0.27*** (-8.67) | -0.379*** (-7.41) |
| O levels and equivalent | -0.145*** (-5.44) | -0.266*** (-6.50) |
| Other qualifications | -0.045 (-1.40) | -0.133** (-2.83) |
| Gender | -0.201*** (-8.43) | -0.261*** (-6.14) |
| Age | -0.015** (-2.15) | -0.045*** (-4.11) |
| Age squared | 0.003*** (3.35) | 0.006*** (4.57) |
| Married | 0.053** (2.53) | 0.032 (0.91) |
| Child dummy | 0.102*** (5.31) | 0.121*** (3.58) |
| Good health | 0.265*** (13.73) | 0.172*** (5.13) |
| Travel to work time | -0.002*** (-4.16) | -0.002* (-1.80) |
| Trade union member | -0.117*** (-6.51) | -0.116** (-2.82) |
| Permanent job | 0.158*** (5.07) | 0.250*** (5.22) |
| Public sector | 0.105*** (5.03) | 0.161*** (3.25) |
| Size 25-99 | -0.117*** (-5.47) | -0.119*** (-3.35) |
| Size 100-499 | -0.218*** (-9.96) | -0.207*** (-4.77) |
| Size 500 plus | -0.195*** (-7.82) | -0.140** (-2.326) |
| Occupation & industry dummies | yes | yes |
| Regional Dummies | yes | yes |
| Mu (1) | 0.441 | 0.319 |
| Mu (2) | 1.030 | 0.753 |
| Mu (3) | 1.456 | 1.187 |
| Mu (4) | 2.211 | 1.804 |
| Mu (5) | 3.685 | 2.993 |
| Log Likelihood | -30984.32 | -8711.88 |
| No of observations | 20.870 | 5829 |

*** Statistically significant at the 0.01 level

** Statistically significant at the 0.05 level

* Statistically significant at the 0.10 level

t Statistics in parenthesis

Table 10: Random Effects Ordered Probit Overall Job Satisfaction Equations by Gender

| | Higher Pay | | Low Pay | |
|--|-------------|-----------|-------------|-----------|
| | Male | Female | Male | Female |
| | Coefficient | t stat. | Coefficient | t stat. |
| Constant | 1.786*** | (7.09) | 3.908*** | (16.10) |
| | | | 3.296*** | (6.95) |
| | | | 3.442*** | (10.44) |
| Log hourly wage | 0.358*** | (11.28) | -0.010 | (-0.30) |
| | | | 0.231 | (0.26) |
| | | | -0.174*** | (-2.99) |
| Log comparison wage | -0.199** | (-2.34) | -0.295*** | (-4.26) |
| | | | -0.136 | (-0.62) |
| | | | -0.029 | (-0.31) |
| Log hours | 0.259*** | (5.54) | -0.240 | (-8.68) |
| | | | -0.114 | (-1.52) |
| | | | -0.159*** | (-4.54) |
| Higher education | -0.330*** | (-8.78) | -0.282*** | (-6.89) |
| | | | -0.231*** | (-2.77) |
| | | | -0.441*** | (-6.95) |
| A levels and nursing | -0.441*** | (-9.87) | -0.141*** | (-3.09) |
| | | | -0.217** | (2.32) |
| | | | -0.443*** | (-6.95) |
| O levels and equivalent | -0.252*** | (-6.44) | -0.125*** | (-3.17) |
| | | | -0.190** | (2.20) |
| | | | -0.315*** | (-6.38) |
| Other qualifications | -0.101** | (-2.11) | -0.042 | (-0.89) |
| | | | 0.031 | (0.31) |
| | | | -0.341 | (-3.41) |
| Gender | - | - | - | - |
| Age | -0.0316** | (-2.52) | -0.029*** | (-2.86) |
| | | | -0.039 | (-1.20) |
| | | | -0.061*** | (-4.84) |
| Age squared | 0.001*** | (3.09) | 0.001*** | (3.69) |
| | | | 0.001*** | (1.39) |
| | | | 0.001*** | (5.23) |
| Married | -0.036 | (-1.260) | 0.099*** | (3.40) |
| | | | -0.080 | (-1.16) |
| | | | 0.066 | (1.52) |
| Child dummy | 0.071*** | (2.76) | 0.145*** | (5.09) |
| | | | 0.030 | (0.45) |
| | | | 0.189*** | (4.27) |
| Good health | 0.330*** | (12.13) | 0.205*** | (7.42) |
| | | | 0.073 | (1.06) |
| | | | 0.192*** | (4.87) |
| Travel to work time | -0.002*** | (-4.07) | -0.002*** | (-3.02) |
| | | | -0.000 | (-0.10) |
| | | | -0.003** | (-2.25) |
| Trade union member | -0.098*** | (-3.92) | -0.031*** | (-4.78) |
| | | | 0.016 | (0.21) |
| | | | -0.117** | (-2.28) |
| Permanent job | 0.047 | (0.93) | 0.199*** | (4.55) |
| | | | 0.335*** | (3.87) |
| | | | 0.190*** | (3.06) |
| Public sector | 0.106*** | (3.43) | 0.124*** | (4.13) |
| | | | 0.089 | (0.80) |
| | | | 0.140** | (2.36) |
| Size 25-99 | -0.112*** | (-3.76) | -0.098*** | (-3.24) |
| | | | -0.152** | (-2.18) |
| | | | -0.115*** | (-2.52) |
| Size 100-499 | -0.144*** | (-4.87) | -0.285*** | (-8.73) |
| | | | -0.087 | (-0.99) |
| | | | -0.280*** | (-5.14) |
| Size 500 plus | -0.177*** | (-5.40) | -0.182*** | (-4.66) |
| | | | -0.109 | (-1.00) |
| | | | -0.151** | (-1.99) |
| Occupation & industry dummies | Yes | Yes | Yes | Yes |
| Regional Dummies | Yes | Yes | Yes | Yes |
| Mu (1) | 0.444 | 0.434 | 0.387 | 0.278 |
| Mu (2) | 1.065 | 0.986 | 0.826 | 0.712 |
| Mu (3) | 1.537 | 1.353 | 1.348 | 1.095 |
| Mu (4) | 2.315 | 2.087 | 1.951 | 1.733 |
| Mu (5) | 3.804 | 3.564 | 3.041 | 2.979 |
| Log Likelihood | -17246.99 | -13558.29 | -2799.572 | -5899.072 |
| No of observations | 11284 | 9586 | 1656 | 4173 |

*** Statistically significant at the 0.01 level
 ** Statistically significant at the 0.05 level
 * Statistically significant at the 0.10 level
 t Statistics in parenthesis

Table 11(a) Transition probabilities between low pay, higher pay and overall job satisfaction

| | Whole sample | | | |
|----------------------------------|--------------|-------|-------|-------|
| | (1) | (2) | (3) | (4) |
| Low paid and satisfied (1) | 61.57 | 7.75 | 27.14 | 3.54 |
| Low paid and dissatisfied (2) | 35.19 | 25.27 | 23.37 | 16.17 |
| Higher paid and satisfied (3) | 5.66 | 0.94 | 81.75 | 11.65 |
| Higher paid and dissatisfied (4) | 3.79 | 3.09 | 46.90 | 46.23 |

Table 11(b) Transition probabilities between low pay, higher pay and overall job satisfaction

| | Men | | | |
|----------------------------------|-------|-------|-------|-------|
| | (1) | (2) | (3) | (4) |
| Low paid and satisfied (1) | 45.52 | 12.28 | 35.29 | 6.91 |
| Low paid and dissatisfied (2) | 30.09 | 21.63 | 24.76 | 23.51 |
| Higher paid and satisfied (3) | 3.14 | 0.90 | 82.62 | 13.34 |
| Higher paid and dissatisfied (4) | 2.58 | 3.27 | 44.17 | 49.98 |

Table 11(c) Transition probabilities between low pay, higher pay and overall job satisfaction

| | Women | | | |
|----------------------------------|-------|-------|-------|-------|
| | (1) | (2) | (3) | (4) |
| Low paid and satisfied (1) | 66.60 | 6.33 | 24.59 | 2.48 |
| Low paid and dissatisfied (2) | 39.09 | 28.06 | 22.30 | 10.55 |
| Higher paid and satisfied (3) | 8.30 | 0.98 | 80.84 | 9.89 |
| Higher paid and dissatisfied (4) | 6.04 | 2.75 | 52.01 | 39.19 |

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