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Job Satisfaction and Employer Behaviour

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Abstract

We investigate the effect of employer behaviour on job satisfaction. Using linked employer-employee data from the 1998 British Workplace Employee Relations Survey, we consider how workplace practices affect individuals' satisfaction with four aspects of their jobs, including pay. The paper covers a range of employer practices, including HRM and internal labour market practices, methods for informing and consulting employees, and job security guarantees. We present an empirical framework for analysing these various facets of job satisfaction simultaneously and find that the existence of internal labour markets is the most effective workplace practice in fostering employees' satisfaction.

JEL classification: J28, J53, J81

Keywords: Job satisfaction, Employer behaviour, human resource management, Linked employer-employee data

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1. Introduction

De-regulation of the employment relationship has characterised the functioning of European labour markets in the last few decades, particularly in the UK (OECD, 1994). This has permitted employers to institute employment practices inducing greater labour flexibility and more employer discretion in employment relations which are often regarded as a strategic feature for maintaining organisational efficiency and price competitiveness in the face of intensifying product market competition. This, in turn, has raised concerns about individuals' labour market prospects, first in terms of availability of good jobs and then concerning opportunities to prosper in those jobs through wage advancements and career development. Much of the literature focuses on earnings levels, earnings progression and perceptions of job insecurity. The research indicates that some groups of workers - notably women, youths, and the less skilled – have borne much of the burden of increasing labour market flexibility (OECD, op. cit.; Gregory *et al.*, 2000). In addition, there appears to be a link between low-wage flexible employment and lower job satisfaction. Despite much public concern and policy debate on these issues, for various reasons - not least data limitations - relatively little is known about the effects of employer behaviour on job satisfaction. In this context, it seems useful to provide empirical evidence concerning how workers' welfare has been affected and what job features really matter for employees' (job) satisfaction.

The paper investigates how much employer behaviour and work practices in force within the workplace matter for employees' job satisfaction. We also consider the following questions. What do workers value more in terms of pecuniary and non-pecuniary attributes of their job? Is there any trade-off between, pay progression, job security and incentive pay? Are individual (subjective) expectations compatible with collective outcomes? We address these issues using a very rich data set that is nationally representative linked employer-employee data for Britain. These data allow us to carefully consider the different facets of workplace practices and assess their importance in affecting individuals' job satisfaction. In particular, we consider the role played by Human Resource Management (HRM) practices, internal labour

market procedures, and methods for informing and consulting employees, on four main features of the jobs (including pay) simultaneously.

Our main empirical findings suggest that non-pecuniary aspects of job satisfaction are highly inter-correlated, and are also correlated with pay satisfaction (though the correlation is not so strong). Demographic, job and workplace attributes account for between one-fifth and one-third of this correlation, while the residual part can be attributed to unobservables. Employer behaviour also affects the various aspects of job satisfaction in different ways. Given this heterogeneity, particular care should be used in interpreting results from simple bivariate correlations or when promoting work practices and other measures purely on the basis of what they might do to overall job satisfaction. For instance, higher pay does result in higher satisfaction with pay, but its relationship with non-pecuniary aspects of job satisfaction is very different.

Surprisingly, two employer practices are associated with higher levels of job dissatisfaction across all four job dimensions: job security guarantees, on the one hand, and formal procedures for resolving collective disputes, on the other; and the association is not the result of reverse causation. On the contrary, we suspect these policies benefit some at the expense of others, or else employers expect labour compliance in return, resulting in lower job satisfaction. Giving preference to internal candidates in the recruitment process is the only employer behaviour associated with lower job dissatisfaction across all four dimensions. Again, we are able to discount reverse causation. It appears that positive action to create internal labour markets enhances job satisfaction across the board, albeit potentially at the expense of outsiders.

The paper is organised in the following way. Section Two reviews the relevant literature. Section Three describes the data. In Section Four we discuss the main features of the empirical methods used. Section Five discusses the results and concludes.

2. The Literature on Job Satisfaction and Employer Behaviour

Job satisfaction is of interest to sociologists in its own right as a measure of subjective well-being and as an indicator of job quality. It is of interest to economists, partly in its own right as one measure of worker utility, but also because reported satisfaction is a good predictor of labour market behaviour and, in particular, job quits (Hamermesh, 1977, 2001). The early literature raised a possible objection to the predictive power of expressed satisfaction, namely that data limitations meant that satisfaction may simply proxy unobserved objective factors, such as modes of supervision or physical working conditions (Freeman, 1978). The subsequent literature has shown that expressed satisfaction retains a significant and economically sizeable impact on labour market behaviour, even in the presence of rich job and workplace controls. Nevertheless, job satisfaction is closely linked to objective features of individuals' working experiences, including features that employers have control over. For instance, Green (2002) establishes that job satisfaction has been in decline in Britain since the early 1990s: this is due, in part, to work intensification, but the primary reason is a reduction in task discretion. Task discretion is clearly one factor that employers have some control over. Green finds other job facets positively affect satisfaction, notably increased participation in decision-making, jobs requiring greater learning time, and jobs with a continual requirement to learn new things. As any cursory reading of the industrial sociology literature reveals, these are all aspects of the job over which employers have genuine choices when configuring the labour process (see, for example, Rose, 1988).

Although Hamermesh (2001: 3-4) may well be justified in arguing that expressed satisfaction indicates the overall desirability of one's job, there are three reasons why it it is useful to distinguish between different aspects of job satisfaction. First, the concept is multi-faceted and analysts find the determinants of satisfaction differ across its various facets. For instance, it is well-known that the link between union membership and satisfaction differs across pecuniary and non-pecuniary job aspects – see for example Bryson et al. (2004). Taking another example, using data from low wage service sector workers in Britain, Brown and McIntosh (1998) show increasing

the relative wage raises satisfaction with short-term rewards (good pay, being with a good employer) but not satisfaction with long-term rewards (having a job for life, liking the business, feeling the job is challenging, and having good promotion opportunities). Thus any index of overall job satisfaction is effectively a weighted average of satisfaction with its component parts. In Brown and McIntosh's (1998) study, the key determinants of overall satisfaction are satisfaction with short-term rewards and long-term prospects, while satisfaction with social relations at work (with colleagues, supervisors) and work levels (hours and effort) are less important. Second, because determinants of aspects of job satisfaction differ, trends in the components can differ over time. Using the British Household Panel Survey (BHPS), Rose (2001) finds no trend in a composite job satisfaction measure. However, when he breaks it into its four component parts, he finds satisfaction with extrinsic dimensions (pay, security) has been rising, whereas satisfaction with intrinsic dimensions (hours and 'the work itself') has been falling. Third, the link between satisfaction and subsequent behaviour has been found to differ across aspects of job satisfaction. For example, Kristensen and Westergaard-Nielsen (2004) find satisfaction with type of work is the most important job characteristic predicting quits in Denmark in the second half of the 1990s, whereas satisfaction with job security is not significant.

Returning to the first point above, it is particularly desirable to differentiate across dimensions of job satisfaction in our case since, a priori, we suspect that different sorts of employer practice will impact differentially on different aspects of satisfaction. As discussed in Section 3, our data contain four domains of job satisfaction – one extrinsic (pay) and three intrinsic (sense of achievement, respect from supervisors or line managers, and influence over the job). The employer practices we identify can be losely grouped into four categories that are not mutually exclusive: human resource management (HRM); internal labour markets; job flexibility and job security; and consultation practices. The emergent literature linking HRM to employee outcomes illustrates the importance of distinguishing between types of HR practice, since employees seem to respond differently to various practices that come under the loose term 'HRM'. For instance, Batt, Colvin and Keefe (2002) find annual establishment-level voluntary quit rates in US telecommunications are lower in the presence of direct participation (self-directed teams, off-line problem

solving groups) and commitment-enhancing HR (pay and internal promotion opportunitities). However, those practices that Batt, Colvin and Keefe (2002) view as cost-cutting HR practices (downsizing, variable pay, electronic monitoring and the presence of flexible workers such as part-timers and temporary workers) are associated with higher quits. To the extent that lower satisfaction predicts voluntary quits, we might expect similar results in our data. In any event, the study is consistent with Green's (2002) work which finds links between work intensification, reduced job discretion and lower job satisfaction, on the one hand, and increased opportunities for participation in decision making and higher job satisfaction, on the other.

The social partnership literature in the UK (which is akin to the mutual gains literature in the US) makes a link between information and consultation practices, job security guarantees and concessions by employees in the flexible deployment of labour (Kelly, 2004). The logic behind this package is a trade-off between management and labour whereby the firm can obtain a competitive advantage through flexible labour practices, in return for which employees obtain some form of guarantee that their increased productivity will not lead to enforced job cuts and can expect to be informed and consulted about strategic decision-making. If successful, this package of employer practices may enhance satisfaction with extrinsic aspects of the job, notably job security, but it is not clear what the implications might be for satisfaction with intrinsic aspects of the job.

This paper does not attempt directly to test hypotheses about the linkages between employer practices and satisfaction. Rather, we simply try to establish whether employer behaviour and the related practices have independent effects on different aspects of satisfaction. Still, the empirical literature reviewed above is suggestive of causal linkages that appear in the theoretical literature. For instance, employer practices that invest in the skills of the workforce and offer opportunities for enhancing career prospects within the firm may elicit higher worker commitment, and are thus often termed 'high commitment' or 'high performance' work practices (eg. Appelbaum et al., 2000). This, in turn, may lead to higher intrinsic job satisfaction. As Handel and Levine (2004: 5) note, such strategies for mutual gains are consistent with Akerlof's (1982) theory of labour contracts as a partial gift exchange where fairness conceptions are central in determining expectations, effort and wages. Of

course, to the extent that workers perceive HR practices as requiring greater effort or commitment to the firm, they may be viewed as a form of labour intensification and, as such, something for which compensating wages should be paid. Where this is so, and where wages are not adjusted accordingly, one might anticipate an adverse impact on job satisfaction. Whether this association would persist having controlled for increased work flows, faster work pace, closer monitoring and wage levels is a moot point.

This discussion suggests, a priori, that it is difficult to predict the direction of any association between employer practices and job satisfaction because much turns on how those practices are perceived by workers. There are other factors that are rarely taken into account in unpicking the relationship between employer behaviour and employee job satisfaction. The first is the position of the employee in the firm hierarchy: because job satisfaction is often determined by an individual's perceptions of her job relative to some peer comparator, what often matters is the impact a practice has on a worker relative to other workers in the establishment with whom the employee compares herself. Usually, this information is not available, and we do not have it in our data. Second, we often know whether a practice is in place in a workplace, but we do not usually know which workers are covered or affected by the practice. This is an important consideration. For example, we might expect a job security guarantee to enhance extrinsic job satisfaction for those covered by the guarantee but, if that security is at the expense of other employees not covered by the guarantee, we might expect the practice to affect employees differently according to whether they are covered.

The third issue, discussed in more detail in Section 4, is the potential endogeneity of employment practices which may arise for one of two reasons. Either employers introduce practices in response to employee satisfaction: for instance, they may introduce job security guarantees where concerns about job security are high, in which case it is the underlying causes of this insecurity, rather than the practice *per se*, which might generate job dissatisfaction. Alternatively, workers may sort themselves into workplaces according to the employer practices in place: for instance, workers who get fed up in their jobs quickly because they tend to get dissatisfied more quickly than others, may not value job security guarantees and, as such, may be less likely to be

employed in workplaces offering security guarantees. If this sorting occurs it may suggest job security guarantees are successful when, in fact, the effect is driven by sorting across workers. In Section 4 we discuss how we tackle this problem of endogeneity.

3. The Data

The data set is the linked employer-employee British Workplace Employee Relations Survey 1998 (WERS). With appropriate weighting, it is nationally representative of British employees working in workplaces with 10 or more employees covering all sectors of the economy except agriculture (Airey et. al, 1999). The survey covers a wide range of issues, allowing for the inclusion of a large set of individual-level and workplace-level controls as well as detailed information on workers' job satisfaction. We use two elements of the survey. The first is the management interview, conducted face-to-face with the most senior workplace manager responsible for employee relations. Interviews were conducted in 2,191 workplaces between October 1997 and June 1999, with a response rate of 80%. The second element is the survey of employees where a management interview was obtained. Self-completion questionnaires were distributed to a simple random sample of 25 employees (or all employees in workplaces with 10-24 employees) in the 1,880 cases where management permitted it. Of the 44,283 questionnaires distributed, 28,237 (64%) usable ones were returned.

The sample of workplaces is a stratified random sample with over-representation of larger workplaces and some industries (Airey et al., 1999). Employees' probability of selection for the survey is a product of the probability of their workplace being selected and the probability of the employee's own selection. To extrapolate from our analyses to the population from which the employees were drawn (namely employees in Britain in workplaces with 10 or more employees) we weight the analysis using the employee weights which compensate for sample non-response bias that may affect the employee survey (see Airey et al., 1999: 91-92). Our estimating sub-sample is all employees with complete information on the variables used in the analysis, namely about 16550 employees drawn from about 1,600 workplaces.

The survey asked each employee to provide a rating, on a five-point scale from 'very satisfied' to 'very dissatisfied', concerning how satisfied they were on four aspects of their job: (i) the amount of influence they had over their job; (ii) the pay they received; (iii) the sense of achievement they got from their work; and (iv) the respect they got from supervisors and line managers. Employee ratings on these four satisfaction dimensions are presented in Table 1 (row percentages). For each of the four facets we built a dummy variable equal to 1 if the individual was either 'very dissatisfied' or 'dissatisfied' and 0 otherwise. It is clear that dissatisfaction with pay is greater than dissatisfaction with the other three job dimensions.

Table 2 presents the means for eighteen employer practices used in our analysis. These include two items relating to information-giving, three relating to consultation, two on autonomy and discretion, three on internal labour markets, four on variable pay, two relating to strategic planning involving employees, one relating to job security guarantees, and one relating to formal collective dispute procedures. Our analyses also include an HRM index loosely based on the managerial concepts outlined by Pfeffer (1995) which he argues produce a sustainable competitive advantage through the effective management of people. The measure is based on a count of practices identified by Pfeffer, supplemented by other aspects of HRM identifiable in the literature.[3]

4. Econometric model

Our aim is to model the association between employer behaviour and reported job satisfaction. More specifically, we are interested in modelling such associations without aggregating information on job satisfaction across job facets; in fact, it may well be that – for example -- a given firm policy or HRM practice favours some aspect of employees' welfare at the expense of some other. In these circumstances, there may be no association between employer practices and the aggregate index of satisfaction because the associations between practices and different facets of job

satisfaction cancel each other out. Furthermore, we wish to account for correlations across aspects of job satisfaction since -- if job satisfaction is a meaningful concept -- we would expect some underlying correlation between facets of satisfaction. Understanding the way in which satisfaction with different job aspects is correlated, and how these correlations are affected by employer behaviour, is something that has not been explored in the literature to date. What is needed to do this, is a simultaneous equations system set-up for the analysis of limited dependent variables; the latter requirement emerging from the fact that the satisfaction scores are measured as four ordered values (see Table 1).

We analyse the relationship between employer behaviour and workers' self-reported welfare by means of a seemingly unrelated (SURE) system of four probit equations. The four dichotomous dependent variables are obtained by dichotomization of the ordered satisfaction variables such that individuals are classified as 'Dissatisfied' or 'Not dissatisfied' with each job facet on the basis of their answers to the satisfaction questions.[4] Let i=1…n index individuals in our sample and let the individual self-perceived dissatisfaction with job facet k, d^*_{ik}, be a linear function of observed personal, workplace and job attributes bundled in the vector x_i, plus an unobserved component u_{ik}:

$$d^*_{ik}=x'_i\beta_k+u_{ik},\ k=1,..4 \qquad (1)$$

We assume that unobserved components follow the standard normal distribution, $u_i \sim N(0,1)$. Whenever the latent dissatisfaction propensity crosses some unobserved threshold, that can be set equal to zero without losing generality, individuals rank themselves as dissatisfied. Let $d_{ik}=\mathrm{I}(d^*_{ik}>0)$ be a dummy signalling that event, the indicator function I( ) assuming the value 1 whenever its argument holds and 0 otherwise. Assuming that unobserved components of the four dissatisfaction propensities follow the four-variate normal distribution with correlation matrix Ω , the probability of being dissatisfied on each job facets takes the form:

$$\mathrm{Prob}(d_i=1)=\Phi_4(\mathrm{B}x_i;\Omega) \qquad (2)$$

where d_i is the vector of dissatisfaction dummies, 1 is a vector of '1's and B is the matrix of coefficients to be estimated. Depending upon the combination of 0/1 in d_i there are 15 other expressions similar to (2) that can be derived to form the likelihood

function for the sample. Given that we have repeated observations by establishment, we employ a robust variance estimator. Moreover, we account for the sampling frame by employing survey stratifications weights. The computation of the four-variate normal cumulative density function that appears in equation (2) is performed by applying simulation estimation techniques (see Cappellari and Jenkins, 2003, for an illustration in the context of system of probit equations). Overall, our estimator is a pseudo-weighted-simulated maximum likelihood.

5. Results

Table 3 presents the estimated correlation of unobservables in the four-variate probit model. Coefficients above the diagonal are obtained from a model that does not control for personal or job attributes -- i.e. in which the x vector only includes a constant term. The associations between the various facets of job dissatisfaction appear to be substantive and are precisely estimated from the data. In particular, it appears that attitudes towards non-pecuniary aspects of the job are more strongly correlated across themselves than they are with dissatisfaction with pay. Coefficients below the diagonal of the table are derived from models that control for a wide array of observed personal, job and workplace attributes (see below). Each sub-diagonal element is smaller in size compared to its super-diagonal counterpart with personal, job and workplace characteristics accounting for between one-fifth and one-third of the correlation. However, the patterns noted above are still present in the data; also each coefficients remains statistically significant, suggesting that even after controlling for observable attributes a substantial component of unobserved heterogeneity remains in the data, supporting the use of the seemingly unrelated system of equations.

The four job satisfaction equations from the SURE 4-variate probit estimations are presented in Table 4. The table focuses primarily on those coefficients associated with job attributes (such as occupation, pay level and working conditions), and the employer behaviour variables described in Section 3. Some of the findings are familiar in the literature. For example, results for gender tend to reproduce the well known results that females are happier at work than males. More generally, we can

see that the determinants of different aspects of job satisfaction differ markedly, confirming the value in treating them separately for analytical and practical purposes. For instance, we find dissatisfaction monotonically decreases with pay only for the 'satisfaction with pay' indicator, whereas for the other dissatisfaction facets the effect is hump-shaped, dissatisfaction peaking between low and medium pay. This may be interpreted as indicating that job aspirations are lower or less frustrated at the tails of the earnings distribution relative to the middle. Similarly, working hours raise only the pay component of dissatisfaction. Individual perceptions of the industrial relations climate are strongly associated with low degrees of dissatisfaction indicating that the relationship with the employer is among the most important factors affecting individual welfare in the workplace.

A number of employer behaviour variables are significantly associated with one or two facets of job dissatisfaction, but only the three behavioural factors highlighted are clearly associated with all four dimensions of job dissatisfaction. These are:

- the presence of guaranteed job security;
- the presence of internal labour markets;
- and the presence of formal procedures for dealing with collective disputes.

Giving preference to internal candidates in the recruitment process is the only employer practice that significantly reduces dissatisfaction and on each item net of all others control factors. The magnitude of the effect is similar for all four job aspects. The finding suggests employees appreciate the opportunities they have as 'insiders' for career development offered through internal labour markets (albeit at the expense of 'outsiders'). This interpretation is also supported by the finding that having discussions with a supervisor about 'how you are getting on with your job' is significantly negatively associated with all four aspects of job dissatisfaction.

Having a policy of guaranteed job security is positively associated with all four aspects of job dissatisfaction, statistically so in all but the case of pay. Similarly, formal procedures for the resolution of collective disputes are associated with greater job dissatisfaction: the association is statistically significant in the case of influence

and pay. These results appear counterintuitive given that these policies and procedures are intended to increase workers' welfare.

There are at least six possible explanations for this puzzling finding in relation to job security guarantees and collective disputes procedures. First, there may be a possible trade-off between the defense of collective interests and individual welfare on the job. For example, job security for all employees might come at the expenses of individual career prospects. Or having collective procedures for dispute resolution may reduce the scope for individual specific pecuniary and non-pecuniary premia. Second, these policies may not cover everyone in the workplace. It may be, for instance, that the job security policy 'buys' job security for some at the expense of others who are not covered. Third, such procedures are often the result of collective bargaining. By its very nature, bargaining creates an 'expectation gap' between what each party ideally wants and what they actually get. It may be that, although the procedure is in place, it doesn't offer the opportunities for dispute resolution or the degree of job security that employees are looking for, resulting in dashed expectations. Fourth, allied to this point, is the 'voice-induced complaining' induced by union bargaining mentioned earlier. We have tried to control for this with variables capturing union representation, recognition and density, none of which are statistically significant themselves, but some of this dissatisfaction could be a spillover from union activity which brings these procedures into being.[5] Fifth, it could be that, in the case of job security guarantees, the employer expects some kind of quid pro quo, by which we mean 'something in return'. According to some of the UK partnership literature (eg. Kelly, 2004) that can often take the form of employer expectations of greater latitude in the deployment of labour. In such circumstances, it is not that surprising that this manifests itself in lower satisfaction with respect to achievement and influence.

While these explanations point towards the existence of some form of causal link between employer behaviour and job satisfaction, a competitive explanation could be based on reverse causality. For example, it could be the dissatisfaction of employees that determines the adoption of formal procedures, and not the reverse. Alternatively, there may be differential worker sorting across workplaces with and without these practices and procedures. For instance, workplaces adopting internal labour markets might disporoportionately attract more intrinsically motivated job applicants relative

to other workplaces - by raising entry barriers to the firm, internal recruitment preferences ensure only those employees who are "committed" to the organisation ever gain admittance. In order to test for this possibility, we extended our model to include as dependent variables the three indicators of employer behaviour in the workplaces where individual *i* is employed, so that overall the model becomes a seven-variate probit one.[6] This endogenization did not lead to substantive change in results (and correlations coefficients referring to the newly introduced dependent variables were not statistically significant) so that the explanation based upon endogeneity can be ruled out[7].

We can therefore reasonably expect that the positive impact of internal labour markets for job satisfaction is a causal effect. The finding lends support to Batt et al.'s (2004) study which, as noted earlier, found a link between internal promotion opportunities and lower voluntary quit rates.

6. Concluding remarks

In this paper we have analysed the relationship between employer behaviour, work practices and employees' job satisfaction. One of the reasons for interest in these issues is related to the changes in labour flexibility and labour market de-regulation occurred, in the UK and in other European countries, in the last few decades. In particular, concerns have been raised concerning individuals' labour market prospects in terms of the availability of (good) jobs and, within those jobs, with respect to the available opportunities in terms of wage advancements and career developments. Moreover, there seems to be a link between low-wage flexible employment and lower job satisfaction which is worth investigating. Using a nationally representative linked employer-employee data for Britain (WERS98), we have analysed a number of questions which seem to be central to the current debate on what makes a "good" (or satisfactory) job. In particular, we have considered the role played by different employers' practices and procedures, such as: Human Resource Management (HRM), internal labour market, and methods for informing and consulting employees; along with three different dimensions of non-pecuniary job satisfaction (i.e. influence over the job, sense of achievement and respect from supervisors) as well as satisfaction

with pay. Two main aspects of this paper provide new and interesting results: first, we show that (dis)satisfaction is a multifacet phenomenon with strong inter-relations among the different dimensions – which need to be adequately modelled -- such that it is difficult *a priori* to predict, either the direction of any association between employer practices and job satisfaction or to assess what the effect on overall (job) satisfaction is. For example, higher pay does result in higher satisfaction with pay, but its relationship with non-pecuniary aspects of job satisfaction turns out to be very different. Second, we discuss the relevance of reverse causation and selection problems in the interpretation of the association between employer behaviour and job satisfaction. For instance, employers may introduce job security guarantees where concerns about job security are high (and dissatisfaction too); alternatively, (heterogeneous) workers may sort themselves, according to their intrinsic characteristics, into workplaces according to the employer practices already in place. In both cases, neglecting the potential endogeneity may significantly distort the estimates.

Our main results suggest the following. Non-pecuniary aspects of job satisfaction are highly correlated among them and are also (weakly) correlated with pay satisfaction. Also, while satisfaction with pay increases monotonically with pay levels the other satisfaction indicators show an hump-shaped relationship, confirming the importance of treating them separately. Individual perceptions of the industrial relations environment are positively associated with satisfaction indicating that a good climate within the workplace is very important for individual welfare. Finally, employer behaviour too is (significantly) associated with some of the dimensions of job dissatisfaction, but only three behavioural factors are clearly determinant for all four dimensions of job (dis)satisfaction, these are: the presence of guaranteed job security; the presence of internal labour markets; and the presence of formal procedures for dealing with collective disputes. With respect to the second of the above listed features, results on the preference accorded to 'insiders' in career development (through internal labour markets), clearly confirm that it increases significantly satisfaction. Conversely, the other two employer practices turn out to be negatively associated to job satisfaction, and the association is not the result of reverse causation. While these results may at first appear counterintuitive, we provide a number of

explanations for that. First there may be a trade-off between collective interests and individual welfare, second these policies may benefit some workers at the expense of others, third employers may expect labour compliance in return, all of them resulting – *ceteris paribus* -- in lower job satisfaction.

A final remark, based on the above findings, suggests that particular care should be used in interpreting the empirical evidence when the different facets of job satisfaction are analysed independently or when simply an indicator for overall job satisfaction is considered.

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Table 1 Distribution of workers according to their degree of satisfaction

"How satisfied are you with":	Very satisfied	Satisfied	Indifferent	Dissatisfied
The amount of influence over your job	11.51	47.75	24.75	12.85
The pay you receive	3.27	32.79	23.52	28.29
The sense of achievement you have from your work	14.08	49.19	21.31	10.94
The respect you receive from supervisors and line managers	13.41	44.45	21.00	12.74

Table 2 Mean scores on employer practices

Variables	Mean	Variables	Mean
Information giving:		*Variable pay:*	
No information given regularly to employees	13.69	Has profit-related pay scheme	40.62
Uses management chain	69.06	Has performance-related pay scheme	25.60
		Has cash bonuses	25.27
		Has employee share option scheme	22.92
Consulation mechanisms:		*Strategic planning involving employees:*	
Has joint consultative committee	39.38	Investor in People	34.07
Regular meetings with entire workforce	39.65	Has strategic plan for employee involvement	73.60
Suggestion scheme	29.34		
Discretion/autonomy:		*Policy of guaranteed job security*	16.68
Lowest degree of autonomy in teams	14.42		
Low work variety for largest non-managerial occupational group	47.07		
Internal labour markets:		*Formal procedure for collective dispute resolution*	64.30
No on-going training	28.32		
Skills not important in recruitment	40.98		
Preference given to internal applicants when filling vacancies	34.76		

Table 3 The correlation structure of job dissatisfaction

	influence	pay	achievement	respect
influence		0.39	0.64	0.64
		(26.85)	(54.67)	(49.74)
pay	0.31		0.39	0.44
	(17.48)		(22.2)	(29.1)
achievement	0.53	0.29		0.61
	(33.72)	(16.47)		(35.72)
respect	0.51	0.30	0.46	
	(26.71)	(16.68)	(21.65)	

Note: The table reports cross- equations correlation of unobservables estimated from four-variate seemingly unrelated systems of probit equations; t-ratios in parentheses; estimate above the diagonal are obtained from constant-only models; estimates below the diagonal are obtained from models that control for personal attributes.

Table 4 Coefficients from SURE job dissatisfaction equations

	Influence		Pay		Achievement		Respect	
Demographic:								
Female	-0.156	(3.47)	-0.286	(7.45)	-0.136	(2.80)	-0.066	(1.48)
Job:								
Professional	0.101	(1.51)	0.159	(2.40)	-0.009	(0.12)	0.016	(0.21)
Associate professional and technical	0.076	(0.90)	0.120	(1.74)	0.013	(0.15)	-0.024	(0.30)
Clerical and secretarial	0.118	(1.61)	-0.056	(0.76)	0.117	(1.45)	-0.065	(0.82)
Craft and skilled service	0.029	(0.32)	0.060	(0.73)	-0.071	(0.66)	-0.097	(1.03)
Personal and protective service	0.087	(0.87)	-0.111	(1.30)	-0.095	(0.80)	-0.014	(0.15)
Sales	0.161	(1.80)	-0.146	(1.56)	0.050	(0.51)	0.066	(0.66)
Operative and assembly	0.192	(2.15)	-0.163	(1.38)	0.308	(3.15)	0.084	(0.85)
Other occupations	0.159	(1.76)	-0.192	(2.04)	0.149	(1.38)	0.060	(0.62)
Weekly pay								
Less than £50	0.223	(1.32)	2.134	(13.11)	0.091	(0.50)	0.154	(0.85)
£51-£80	0.232	(1.58)	2.052	(14.12)	0.108	(0.66)	0.235	(1.49)
£81-£140	0.304	(2.27)	2.000	(15.30)	0.170	(1.16)	0.405	(2.91)
£141-£180	0.379	(3.07)	2.004	(15.58)	0.283	(1.97)	0.421	(3.26)
£181-£220	0.367	(3.27)	1.941	(16.14)	0.276	(1.99)	0.451	(3.56)
£221-£260	0.303	(2.69)	1.708	(14.43)	0.240	(1.84)	0.410	(3.46)
£261-£310	0.280	(2.51)	1.571	(13.79)	0.117	(0.88)	0.368	(3.09)
£311-£360	0.241	(2.18)	1.359	(11.58)	0.224	(1.73)	0.437	(3.71)
£361-£430	0.287	(2.70)	1.017	(9.51)	0.190	(1.55)	0.348	(3.13)
£431-£540	0.200	(2.02)	0.830	(8.18)	0.133	(1.16)	0.297	(2.96)

£541-£680	-0.065	(0.57)	0.616	(4.75)	-0.093	(0.69)	0.166	(1.43)
Hours worked per week	0.022	(0.83)	0.205	(8.91)	-0.032	(1.18)	0.018	(0.60)
Temporary contract	-0.088	(0.94)	-0.250	(2.79)	0.050	(0.53)	-0.224	(2.23)
Fixed term contract	0.011	(0.11)	-0.167	(1.85)	0.099	(0.91)	-0.062	(0.60)
Overtime normally paid	0.017	(0.42)	0.009	(0.26)	0.077	(1.89)	-0.029	(0.67)
Job done equally by men and women	-0.071	(1.79)	-0.075	(2.32)	0.005	(0.10)	-0.080	(1.93)
Work-life balance practices:								
Availability of flexible working hours	-0.022	(0.17)	-0.153	(1.72)	0.000	(0.00)	-0.061	(0.54)
Availability of job sharing	-0.139	(1.03)	-0.157	(1.61)	-0.143	(1.23)	-0.057	(0.47)
Availability of parental leave	-0.142	(1.01)	-0.308	(3.16)	-0.001	(0.01)	-0.054	(0.40)
Availability of nursery	0.112	(0.32)	-0.495	(1.85)	0.090	(0.36)	0.075	(0.26)
Can take day off if needed	-0.215	(2.49)	-0.171	(1.81)	-0.252	(2.41)	-0.352	(4.39)
Supervisor discussions:								
Has discussed with supervisor about how getting on with job	-0.077	(2.07)	-0.124	(3.26)	-0.095	(2.53)	-0.243	(6.65)
Has discussed with supervisor about promotions	-0.001	(0.02)	0.093	(2.56)	0.067	(1.44)	0.048	(1.09)
Has discussed with supervisor about training	-0.062	(1.43)	-0.045	(1.12)	-0.069	(1.66)	-0.083	(2.17)
Has discussed with supervisor about pay	-0.038	(0.95)	0.344	(10.64)	-0.021	(0.52)	0.005	(0.13)
Perceptions of management:								
Thinks management understanding of employees' problems	-0.233	(6.66)	-0.184	(5.64)	-0.285	(8.04)	-0.488	(12.84)
Thinks meetings management/employees are useful	-0.304	(7.73)	-0.243	(7.37)	-0.332	(8.67)	-0.473	(11.76)
Union presence:								
Trade union recognised	-0.080	(1.18)	-0.081	(1.21)	-0.102	(1.40)	0.045	(0.73)
Any representative of recognised union at workplace	0.034	(0.55)	0.021	(0.35)	0.069	(1.10)	-0.108	(1.83)

Workplace union density	0.003	(3.16)	0.001	(0.75)	0.001	(0.81)	0.001	(1.54)
Thinks relations management/employees are good	-0.715	(17.82)	-0.417	(13.03)	-0.597	(14.28)	-0.997	(23.17)
Thinks managers are in favour of trade unions	-0.066	(1.21)	-0.063	(1.48)	-0.019	(0.39)	-0.194	(3.59)
HRM practices:								
Low degree of HRM	-0.025	(0.45)	0.032	(0.67)	0.084	(1.46)	0.033	(0.64)
No information regularly given to employees	-0.036	(0.57)	-0.019	(0.37)	-0.082	(1.44)	-0.075	(1.33)
Low autonomy for team-working	0.005	(0.08)	-0.079	(1.58)	-0.080	(1.41)	0.014	(0.25)
No on-going training	-0.051	(1.13)	0.011	(0.29)	0.001	(0.01)	0.083	(2.00)
Skills not important in recruitment	0.044	(1.15)	0.013	(0.40)	-0.037	(0.96)	-0.002	(0.05)
Has policy of guaranteed job security	**0.090**	**(1.75)**	**0.049**	**(1.17)**	**0.128**	**(2.41)**	**0.142**	**(2.86)**
Low job variety/discretion/control for largest non-managerial group	0.087	(2.53)	-0.033	(1.02)	0.000	(0.01)	0.038	(1.09)
Preference given to internal applicants	**-0.093**	**(2.49)**	**-0.086**	**(2.47)**	**-0.098**	**(2.56)**	**-0.098**	**(2.79)**
Profit-related pay scheme	-0.092	(2.06)	-0.035	(0.91)	-0.072	(1.47)	-0.057	(1.29)
Performance-related pay scheme	0.053	(1.29)	-0.036	(0.97)	0.070	(1.77)	0.037	(1.02)
Cash bonuses	0.026	(0.66)	0.046	(1.33)	-0.054	(1.37)	0.006	(0.15)
Employee share option scheme	0.071	(1.30)	-0.014	(0.30)	0.133	(2.62)	0.061	(1.24)
Joint consultative committee	-0.020	(0.54)	0.007	(0.19)	0.050	(1.32)	0.060	(1.64)
Regular meetings with entire workforce	-0.002	(0.04)	0.001	(0.01)	-0.018	(0.50)	-0.026	(0.73)
Team briefings	-0.008	(0.23)	-0.042	(1.34)	0.028	(0.78)	-0.029	(0.92)
Management chain	0.020	(0.47)	-0.019	(0.50)	0.016	(0.42)	0.012	(0.29)
Suggestion scheme	-0.058	(1.41)	-0.039	(1.09)	-0.073	(1.76)	-0.015	(0.41)
Formal strategic plan for employee development	0.027	(0.64)	0.015	(0.36)	0.088	(2.11)	0.074	(1.83)
Investor in People	0.034	(0.85)	-0.052	(1.50)	0.066	(1.61)	0.058	(1.60)
Formal procedure for collective disputes resolution	**0.081**	**(1.88)**	**0.113**	**(2.77)**	**0.054**	**(1.13)**	**0.060**	**(1.41)**

Four-variate probit estimates, N=16550. Regression includes controls for age, marital status, parental status, education, health status, ethnicity, industry, region dummies, type of establishment (single, head), workforce composition at workplace, establishment age and size, union representation, recognition and density. Regression uses sampling weights. Asymptotically robust t-ratio in parentheses allow for repeated observation on the same workplace