

Fairness and satisfaction: Do I care if you pay me less?

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1. Introduction.

There has been an enormous surge in the number of studies of satisfaction and/or happiness in the recent economics' literature (recent surveys are provided by van Praag, 2007; Blanchflower, 2008; Dolan et al., 2008; Falk et al., 2008).

Improved data sources.

Links with psychology literature.

Growth in behavioural economics.

There are also many criticisms that can be made of these studies, for example:

- the relationship between the reporting function for the subjective valuation and the true objective measure (Oswald, 2008).
- the fundamental assumption that respondents supplying the same survey response do actually have the same utility/happiness level (van Praag, 2007; page 8).

There is evidence, however, that this is a legitimate assumption and that such subjective measures, if collected and analysed in a credible manner (Headey and Wooden, 2004), may have a valid role to play in the measurement of social welfare (Kahneman and Krueger, 2006; page3).

There are already studies of satisfaction amongst employees using WERS04 (Haile, 2007; Asadullah and Fernandez, 2006).

Whilst different measures of satisfaction are typically adopted across the studies, their results are generally consistent with other similar studies (Ferrer-i-Carbonell and Frijters, 2004).

The main contribution we make to this research area is to explore

(i) fairness and satisfaction, and

(ii) the relationship with relative wages.

Data

The data used in this study are drawn from the British Workplace Employee Relations Survey 2004 (WERS04), version 2.

Measures of fairness and satisfaction.

‘Managers here treat workers fairly’. The responses are scaled from 1 to 5 with three being a neutral response. A binary measure is constructed whereby fairness is assumed if responses are stronger than the threshold level and zero otherwise.

It may be the case that there is asymmetry around the neutral response or, in other words, well-being is responding differently to the determinants than ill-being is (Clark et al, 2006; Ferrer-i-Carbonell, 2005).

A binary measure capturing only positive responses avoids this complication.

The measure of work satisfaction (binary) is constructed in an analogous manner from the responses employees' provide when they are asked if they are 'satisfied with work itself'.

Finally, an aggregate index measure of job satisfaction is calculated from the sum of six job satisfaction measures (binary) for the individual employee.

These satisfaction measures are:

satisfaction with influence over job;

satisfaction with pay;

satisfaction with sense of achievement;

satisfaction with scope for using own initiative;

satisfaction with job security;

and satisfaction with work itself.

In each case a binary measure is constructed for positive responses (those above the threshold level) and then these binary measures are summed to form the aggregate index measure of job satisfaction that can range between 0 and 6.

Summary statistics for the fairness, work satisfaction and job satisfaction measures are provided in the final rows of Table A2, see also the main tables' handout for selected summary statistics.

Table 1. Selected summary

	<u>Total</u>		<u>Full-time</u>		<u>Part-time</u>	
	mean	s.e.	male	female	male	female
fair treatment binary	0.567	0.006	0.539	0.564	0.633	0.617
satisfied work binary	0.722	0.005	0.684	0.737	0.726	0.785
job satisfaction index	3.487	0.022	3.306	3.567	3.589	3.744
No. of observations	19670		8238	6041	959	4409

Source: WERS 2004, version 2.

Female and part-time employees are more likely to be satisfied with work; relationships with fairness are more complex. Amongst part-time employees, females are less likely to believe managers are treating them fairly in the workplace but not significantly so.

Data on fairness are rare, and there have been few studies outside of the experimental economics research area (where the data are often generated from laboratory experiments).

The determinants of fairness and satisfaction

Individual characteristics

Variable definitions in table A1, summary statistics (total sample, full-time male and female, and part-time male and female, employees) are presented in Table A2.

highest level of education the individual has received across a range of educational categories.

Age: A 'U' shaped relationship between age and satisfaction has been established in the literature (Blanchflower and Oswald, 2008).

Training: days employee spent in employer-provided training in the previous year.

Earnings: average hourly earnings for each employee.

Also include further individual employee characteristics such as demographic variables (dependent children, marital status, ethnic identification, and physical disability); individual job characteristics (being on a fixed term contract, current tenure, and union membership); and occupation.

Occupational segregation: women may have higher job satisfaction if they are more likely to be working with women. Bender et al., (2005) explore this hypothesis by including measures of gender segregation at the workplace.

Workplace characteristics

A range of workplace characteristics are included in the analyses, these can be considered in clusters: industrial sector; physical and market conditions; employment conditions; and industrial relations measures.

Estimation

Considering first the binary measure of fairness (F), or work satisfaction (WS), the probability that the employee i responds positively to being treated fairly (or being satisfied with work) in workplace k is given by:

$$\Pr(F_{ik} = 1) = \theta(\beta X_{ik}) \quad (1)$$

$$F_{ik}=1 \text{ iff } F_{ik}^* > 0, F_{ik} = 0 \text{ else,}$$

where X_{ik} is a vector of the explanatory variables, and θ is the standard normal distribution function.

The model for the scaled measure of job satisfaction is instead estimated using the ordered probit estimation method. It is assumed that the satisfaction reflects a latent welfare variable (s^*) dependent on observed characteristics (X) and an unobserved component (ε).

$$s_{ik}^* = \beta X_{ik} + \varepsilon_{ik} \quad (2)$$

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

Estimation results

For full results for the estimates of the model: for the binary indicator of fairness (Table A3); the binary indicator of work satisfaction (Table A4); and the scalar indicator of job satisfaction (Table A5) for the full sample, full-time employees (male and female), and part-time employees (male and female), respectively.

The tables report partial (or differential effects) and all the estimates employ complex survey weights.

The models include the full set of explanatory variables discussed above: individual characteristics; occupations; job characteristics; industry; workplace characteristics; regions; and measures of gender segregation at the workplace and the occupational level.

The results for the job satisfaction index (A5) tend to be stronger than those for work satisfaction alone (A4) as may be expected giving the more generic nature of the index and the multiple facets of job satisfaction that it captures. The results are otherwise similar to those found for work satisfaction.

Relative wages

There are many studies exploring the relationship between income and satisfaction levels, the results are not unambiguous (van Praag 2007).

Ferrer-i-Carbonell (2005) found that relative income is almost as important for an individual's level of happiness as is their absolute income level.

There are fewer studies that address the simpler relationship between current wages and satisfaction.

The direction of the expected relationship is again not obvious a priori: employees appear to have a good understanding of their wage relative to their fellow employees (Heywood, 1993) and may be unsatisfied if their wage is lower than other relative wages leading them to feel envious or unfairly treated (Zisso and Oswald 2001).

Alternatively, working in a workplace where their wage is low relative to the other wages may encourage the employee to believe that they too will receive higher wages in the future (Clark et al, 2006) and induce them devote more effort to their work tasks (Akerlof and Yellen 1990).

We consider five alternative measures of the individual employee's relative wage.

Preliminary Conclusions

The determinants of perceived fairness, work satisfaction and job satisfaction are similar but not identical across the groups of employees.

The key variables associated with work satisfaction are:

Relative earnings are also found to be important for the perceptions of fairness and work and job satisfaction.

The key comparator workplace earnings measure that individuals appear to be comparing their earnings with are:

Is there a comparator wage?

Are female employees different to male employees?