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What Makes a Good Job? Evidence From OECD Countries

Andrew Clark
Université d'Orléans, France

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Andrew E. Clark[1]

(CNRS and LEO-CRESEP, Université d'Orléans)

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[1] Address: LEO-CRESEP, Université d'Orléans, B.P.6739, 45067 Orléans cedex 2, France. Telephone: 33-2-38-41-73-65. Fax: 33-2-38-49-46-35. Email:Andrew.Clark@univ-orleans.fr.

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Andrew E. Clark

1. Introduction

Consideration of the worker's lot has until recently been concentrated on his/her remuneration. A recent literature, driven in part by the observed disparity between North American and European hours of work, has introduced an additional emphasis on the length of the working week; a related strand has looked at involuntary part-time work. The current report uses comparable survey data across nine different OECD countries to extend the above to a number of other job characteristics which workers say they value.

This report examines the distribution of "good jobs" and "bad jobs", not as defined by an outside observer but as experienced and reported by workers themselves. A (partial) taxonomy of six components of a good job, as viewed by workers, is presented: pay; hours of work (both overwork and underwork); future prospects (promotion and job security); how hard or difficult the job is; job content (interest, prestige and independence); and interpersonal relationships. These are all argued to be important correlates of a good job, from the worker's point of view, or of job satisfaction.

Job satisfaction is important in its own right as a part of social welfare, and this (simple) taxonomy allows a start to be made on such questions as "In what respects are older workers' jobs better than those of younger workers?" (and vice-versa), "Who has the good jobs?" and "Are good jobs being replaced by bad jobs?". In addition, measures of job quality seem to be useful predictors of future labour market behaviour. Workers' decisions about whether to work or not, what kind of job to accept or stay in, and how hard to work are all likely to depend in part upon the worker's subjective evaluation of their work, in other words on their job satisfaction.

A small body of research in economics and psychology has considered these questions by relating satisfaction scores to subsequent observable labour market behaviour. Perhaps the most obvious expected correlation is with quits: workers who are dissatisfied should be more likely to quit (if satisfaction can be compared between individuals). Freeman (1978) uses American panel data to show that job satisfaction is a significant predictor of quits, with an effect which is, in two

of the three datasets examined, at least as powerful as that of wages. Similar results using American data are found in Akerlof, Rose and Yellen (1988) and McEvoy and Cascio (1985), and by Clark, Georgellis and Sanfey (1998) using ten waves of German panel data. Other research has found that job satisfaction is negatively correlated with absenteeism (Clegg, 1983) and non-productive and counter-productive work (Mangione and Quinn, 1975)[1] . Last, Clark (1997) concludes that potential job satisfaction may help to explain the decision to work itself: dissatisfying and/or unpleasant jobs discourage labour force participation. An implication is that we only observe a sub-sample of potential workers - there are some who don't find the jobs on offer attractive enough to participate. One can argue that this phenomenon will be more important for women than for men, and for older rather than for middle-aged individuals. It may also be relevant for younger age-groups where some can choose to stay on in school.

This report suggests that there are more aspects of a good or satisfying job than just pay and hours. Concentration on only one or two of these aspects is likely to give a misleading picture both of where the good jobs are[2] and of workers' behaviour.

2. What makes a good job?

Analysis of the labour market typically emphasises pay and hours of work. For example, studies of differences in labour market outcomes between different groups (males and females; blacks and whites) focus almost exclusively on wages, with a subsidiary interest in hours of work. However, it seems likely that many different aspects of a job, in addition to wages and hours of work, are valuable to workers.

Some supporting evidence for this view comes from the 1989 International Social Survey Programme (ISSP) dataset. The ISSP is a continuing program of cross-national collaboration carried out by a group of national research institutes. Each year the ISSP surveys focus on a different area. The most useful for the analysis of the different components of job quality is that of 1989 on "Work Orientation", in which workers provide information on a wide range of job attributes. The 1989 survey contains information on nine OECD countries[3] . Restricting the sample to those aged between 16 and 65 years old, the numbers of workers interviewed in each country is as follows:

Number of workers interviewed in OECD countries: 1989 International Social Survey Programme (ISSP) dataset.

Austria	864
Hungary	596
Ireland	467
Italy	576
Netherlands	691
Norway	1175
United Kingdom	1051
USA	846
West Germany	636
Total	**6902**

Workers in the 1989 ISSP were asked to evaluate nine different aspects of a job, using five rankings from "Not at all important" to "Very Important". The job aspects presented were: High income; Leaves a lot of leisure time; Flexible working hours; Good opportunities for advancement; Job security; Interesting job; Allows to work independently; Allows to help other people; and Useful to society. Table 1 shows the percentage of workers across all countries who ranked the aspect in question as "Very Important". As for most of the data presented here, figures are presented separately for men and women, for three age-groups (16 to 29, 30 to 44, and 45 to 65), and for the USA, Hungary, and Western Europe (the latter being the weighted average of the seven Western European countries above)[4]. The *'s to the right of the figures for women indicate whether there is a significant difference in the percentage saying a job aspect is very important between men and women. Similarly, the *'s to the right of the figures for 16-29 year olds indicate whether there is a significant difference in the percentage saying a job aspect is very important across the three age groups. Last, the *'s to the right of the figures for Western Europe indicate whether there is a significant difference in the percentage saying a job aspect is very important between Western Europe, Hungary and the United States.

Table 1 shows that, with the exception of Hungary, pay is ranked as one of the least important aspects of a job. In addition, the two job aspects pertaining to hours of work (flexible hours and leaves a lot of leisure time) are the lowest-rated of the nine characteristics considered. The highest-ranked aspects (across all countries) are job security and job interest, then promotion opportunities and the ability to work independently. There is remarkable consistency between

men and women and across age groups with respect to what is important in a job[5] . There is some evidence that American workers are more interested in promotion opportunities than are Western Europeans, and less interested in job security and leisure time.

Based partly on the job aspects listed in Table 1, and partly on standard categories of job quality used in Management and Work Psychology (see Warr, 1998, for example), the six following broad groups of job attributes have been identified:

- Pay.
- Hours of work.
- Future Prospects.
- How hard or difficult the job is.
- Job content: interest, prestige and independence.
- Interpersonal relationships.

These categories are not exhaustive, but serve to summarise many of the job characteristics that workers find important[6] .

The key question is what information we have about these attributes. A general point is that some of these characteristics are not measurable in the way that income and hours are. This applies to interpersonal relationships, job interest and job difficulty, among others. For these types of items, we have to pass via the worker herself to have any idea of their level and distribution. In addition, many of them do not appear in the kind of large-scale surveys upon which economists (and governments) depend for much of their statistical information. Another point is that other items in the list can be measured, but it is not clear that they have a linear relationship with job quality. Most would agree that, *ceteris paribus*, a higher-paid job is a better job (at least up to a certain point), but the situation with respect to hours, for example, is less clear-cut. A 35 hour per week job may be too long for some people and too short for others. There is no way of knowing without asking workers how many hours they would prefer to work. Thinking of job security, which is one of the components of future prospects, the same qualification can be applied to temporary jobs: some workers want them and others don't[7].

The approach used in this report is to complement the cross-national information obtained from national statistical agencies with a wide range of measures reported by workers in the 1989 ISSP data[8] . The full details of the ISSP questions used below, and of the variables constructed

from them, are contained in Annex A. The remainder of this section discusses each of the six job quality categories listed above in turn.

2.1 Pay

Income is typically found to be positively correlated with overall job satisfaction (see Blanchflower, Oswald and Warr, 1993, for example). There is probably more information available about pay than about any other job characteristic, and no attempt at a synthesis will be made here. In the OECD, some countries, such as Canada, Switzerland and the United States, are considered to have (on average) higher wages than others, such as the Czech Republic, Hungary, Mexico, Poland and Turkey (see OECD *National Accounts* data). The contentious issue of the distribution of low pay between countries and between groups of workers was treated in OECD (1996*b*).

One strand of research has suggested that relative, as well as absolute, income matters to workers. In this formulation, workers care about their rank or relative position in some income distribution, as well as about the dollar amount of their paycheck (see Frank, 1985 and 1993). Attempts to find supporting empirical evidence have had to tackle the thorny question of "Relative to whom?", *i.e.* Who is in the reference group? Some recent work has considered the reference group as those with the same characteristics as the individual and who do the same type of job. Workers' job satisfaction has been shown to fall as the pay of this reference group rises: see Clark and Oswald (1996), Lévy-Garboua and Montmarquette (1997) and Donohue and Heywood (1997) for results using British, Canadian and American data respectively.

The ISSP data contain a measure of workers' income which may pick up both absolute and relative components: the response to the question "Is your income high?". The percentage who evaluate their income as high is presented in the first panel of Table 2. Overall, less than a quarter of workers agree with this statement. The figures in Annex B show that workers in Austria, Italy, the USA and West Germany are most likely to consider their income as high, with the lowest figure being found in Hungary. Men are more likely than women to rate their income as high, and there is a positive correlation with age.

The wage is typically only part of a job's financial rewards. A complete picture of the remuneration received by the employee would have to take into account non-pecuniary or fringe benefits. Unfortunately, no information on these benefits is available in the current dataset.

2.2 Hours of work

Hours of work have recently become an important policy issue, figuring in debates over both potential cures for Europe's high unemployment and discussions of overwork. OECD figures show that the highest average hours figures are found in the Czech Republic, Ireland, Japan, Mexico, Turkey and the USA, while Northern European countries (France, Germany, Netherlands, Norway and Sweden) post the lowest. OECD (1997*b*) provides information about both cross-country differences in average hours worked and developments over time (downward in almost all countries, except for the USA). Men work longer hours than women, and younger workers work longer hours than older workers.

An alternative approach is to consider the percentage working part-time. In OECD countries in 1996, this reached a maximum of 37 per cent of workers in the Netherlands (where two-thirds of women work part-time) and was 25 per cent or more in Australia, Ireland, Norway and Switzerland. At the other end of the scale, this figure was 6 per cent in the Czech Republic and Hungary, and 7 per cent in Italy. Only 3 per cent of Czech, Italian and Spanish men work part-time. In general, the percentage working part-time is much higher for women than for men.

It is important to bear in mind the caveat evoked above when considering this information: actual hours have to be considered in terms of their relation to workers' desired hours. At the same time as average hours have been falling in most countries, the percentage of workers classified as involuntary part-time has risen from its trough level in 1990. The figures in OECD (1995) show that involuntary part-time work is more common for women than for men (affecting over eight per cent of female workers in Australia, Canada, the Netherlands and New Zealand, compared to figures of around two per cent for men in most countries), and reaches its highest level for younger workers. There is some evidence of a U-shaped relationship with age for men, with a higher incidence of involuntary part-time work being found for workers nearing retirement age.

On the opposite side of the coin from involuntary part-time work (which might be considered as underwork) is overwork[9] . Here we have a relevant question in the ISSP data: the percentage of workers who would like to spend less time in their job. The single country numbers show that 40 per cent of all workers in the United Kingdom wish to reduce their hours of work. At the other end of the scale, a desire for fewer hours is expressed by less than 20 per cent of workers in Austria. Within countries, the desire for fewer hours is strongly negatively correlated

with the worker's actual hours of work. However, across countries there is no such relationship. The average figure for the percentage wishing to work fewer hours is low for the countries with the lowest actual average hours worked in the 1989 ISSP (the Netherlands and Norway), as might be imagined, but is also low for the countries with the highest hours worked figures (Austria and Ireland). In Table 2, women and younger workers are less likely to want to work fewer hours. Overall, a somewhat higher percentage of American workers than European workers wish to reduce their hours of work.

Another aspect which falls under the general rubric of hours of work, but for which no numbers are presented here, is the time taken to travel to work (and the public transport available, number of changes etc.). This question sometimes appears in surveys, of the labour force or otherwise[10] .

2.3 Future prospects - promotion and job security

Income and hours provide (as, indeed, do job difficulty, job content and interpersonal relationships) a snapshot of a job at a point in time. As Table 1 made clear, of interest also are the job's future prospects. Broadly speaking, these may be summarised as "What is the job going to be like in the future?" and "What are my chances of still being in this job in the future?".

Regarding promotion, workers in the ISSP are asked to rate their opportunities for advancement in their current job; the third panel of Table 2 shows the percentage of workers who say that these opportunities are high. Overall, less than a quarter of workers find that their promotion opportunities are high (which is very close to the figure saying that their income is high). Women are less likely than men to report high promotion opportunities, perhaps reflecting their perception of the "Glass ceiling"; promotion opportunities seem to decline with age. This is one of the few aspects of a good job presented in this report for which younger workers do better than older workers.

With respect to job security, there has recently been a great deal of interest in the question of whether jobs have become less stable; job security is also the aspect of a job which the highest percentage of workers rate as very important in Table 1. Although evidence is mixed at best regarding recent developments in the likelihood of job loss, one possibility is that the consequences of separation have become more unpleasant (see OECD, 1997*a*). A related issue is that of temporary employment. OECD (1996*a*) presents figures showing that temporary

employment is more widespread for men than for women, and that its incidence falls sharply with age. In OECD countries, the largest figures for temporary employment incidence are in Spain (34 per cent) and Australia (24 per cent); the lowest figures are in the USA (2 per cent), Belgium (5 per cent), and Italy and the UK (both 7 per cent). Over the period 1983 to 1994 there was a noticeable rise in temporary employment in Australia, France, Spain and the Netherlands, but little evidence of a generalised increase in incidence across all OECD countries.

In the ISSP survey, workers are asked whether their job is secure. The percentage agreeing with this statement is shown in the fourth panel of Table 2. It is noticeable that over seventy per cent of workers agree or strongly agree that their job is secure. There is little variation by sex or by age in this measure of workers' reported job security, nor is there much difference in its level between the United States and Western Europe[11] .

Another element which could enter into this rubric of future prospects, but about which the ISSP does not contain any information, is the training that the worker receives at their current job.

2.4 How difficult is the job?

The second half of the list of six attributes of a good job moves into territory that has been less-well studied. The next indicator is that of the difficulty or "toughness" of a job. This is something which would be very difficult for an outside observer to measure, except in the most rigorous of case-studies; again, it becomes almost essential to obtain information from the workers themselves. An additional argument for doing so is that certain jobs may be considered difficult by some workers, but not by others; or difficult in some combination of work conditions, but not in others. We cannot know unless we ask those who are doing the jobs.

The ISSP contains information concerning exhaustion, hard physical work, stress, dangerous conditions of work, unhealthy conditions, and physically unpleasant conditions. For example, 31 per cent of the sample report stress at work always or often, and 77 per cent report it at least sometimes. The figures for physically unpleasant conditions of work are 15 per cent and 35 per cent respectively. Both stress and physically unpleasant work conditions are reported more often by men than by women, and the incidence of stressful work rises with age, whereas that in physically unpleasant conditions declines with age.

Information regarding the six measures above has been combined to construct a (1, 0) dummy variable for "hard work" (see Annex A for details). This measure turns out to be that for which there is the greatest difference between the sexes. Just under half of women report hard work (according to the definition used here), compared to nearly two-thirds of men, with the overall average figure being 56 per cent. There is also a strong negative correlation between the incidence of hard work and age. Last, workers in Hungary are more likely to report hard work than workers in the other European countries in this sample or workers in the United States.

2.5 Job content: interest, prestige and independence

The next composite indicator is one which concentrates more on the psychological aspects of the job, rather than on its mechanics. As above, a single (1,0) measure, of "good job content" (for want of a better expression) has been created from disparate information regarding boredom at work, whether the job is interesting, whether the job helps other people, whether it is useful to society, if the respondent can work independently, and if the respondent is free to plan their own work. These last two items measure the job's autonomy, often considered by Psychologists to be one of the key aspects of a job's attractiveness. Some of these six measures pick up the extent to which the job contributes to the worker's personal development.

Fifty five per cent of workers in the ISSP sample report good job content. For this measure, there is no appreciable difference by sex. There is a strong positive correlation with age: it is again the younger workers who do worst on this measure. The country figures show little sharp differences, although it is noticeable that, for this measure, the highest percentage reporting good job content is found amongst Hungarian workers.

2.6 Interpersonal relationships

The last attribute of the job on which information is available in the ISSP dataset concerns relations at work, both with co-workers and with management. Unfortunately, workers were not asked how important relations at work are (in the battery of questions whose responses are summarised in Table 1), but casual observation suggests that how well the individual "gets on" with the other people at work is a key part of how that job is perceived.

Workers were asked to evaluate both relations between management and employees, and relations between workmates / colleagues. A job was characterised as having "good relations" if

the worker reported that both were either quite or very good. Overall, two-thirds of workers in this dataset have jobs characterised by good relations. Women are slightly more likely to report good relations than are men, and there is a noticeable positive correlation with age. Workers in the United States have the lowest figure for this measure of job quality.

2.7 Values and Outcomes

It is of interest to ask whether those who say that a certain characteristic of a job is very important are more likely to have a job displaying that characteristic. Such a relationship might be taken as evidence of self-selection of workers into jobs which suit their preferences. Table 3 presents the results for those job characteristics where we have information on both workers' values and job outcomes.

The numbers in Table 3 should be read as follows. In the first row, 24.9 per cent of those who said that income was very important (see Table 1) had jobs in which they said their income was high, as opposed to 21.5 per cent of those who did not say that income was very important. As it turns out, this is one of the smallest percentage point differences in the table. Very large differences are found between the percentages with jobs which are interesting/offer independence/useful/helpful, as a function of whether the worker said that the job characteristic in question was very important. All of these differences are statistically significant at the one per cent level. As one might expect, workers seem to have a tendency to sort themselves into the jobs which offer the rewards that they value highly.

3. The distribution of good jobs

Having the above information on many different job characteristics available simultaneously for a large number of individuals allows us to say something about different types of dissatisfying jobs. For example, across the nine OECD countries in the 1989 ISSP, 37 per cent of workers report, according to the definitions in section 2, both low income and low job content. This percentage is almost identical for males and females, but shows a strong negative correlation with age: 46 per cent of 16 to 29 year olds report such a combination, as opposed to 36 per cent of those aged 30 to 44 and 31 per cent of those aged 45 to 65. Similarly, 45 per cent of workers report both hard work and poor job content. This is split up into 39 per cent of female workers but 49 per cent of male workers, and there is again a negative correlation with age.

One way of bringing all of this information together is to ask workers to do it for us. A summary measure available in the 1989 ISSP is that of overall job satisfaction. The last row of Table 2 shows the percentage of workers who report that they are completely or very satisfied in their current job (respondents choose between seven possible answers, ranging from completely satisfied to completely dissatisfied). The numbers show that a somewhat higher percentage of women than men report high job satisfaction, and that there is a positive correlation with age, workers in the 45 to 65 age group being the most likely to have satisfying jobs. Workers in the United States are more likely than those in Western Europe to report satisfying work, whereas by far the lowest percentage of satisfied workers is to be found in Hungary[12] .

Relating this summary measure to the individual components identified in Section 2, it can be seen from Table 2 that, on a broad canvas, more women than men do worse on the financial rewards of a job (income and promotion), but that women are more likely to report better jobs in terms of how hard the job is and relations at work. With respect to age, 16 to 29 year olds do worse than 45 to 65 year olds on five measures out of seven in the first seven panels of Table 2, coming out better only in terms of hours worked and promotion prospects.

The country distribution of good jobs is also somewhat mixed. Workers in the United States do better than their Western European counterparts in terms of income, promotion and job security; worse in terms of hours worked and relations at work. The differences here are generally rather small though. The largest differences are found between Hungary and all other countries for the measures of income, promotion opportunities and hard work. However, Hungarian workers do roughly as well as those in other countries in terms of their hours, job security and relations at work, and better in terms of job content, which shows to what extent generalisations can cover up more complex patterns at the more disaggregated level.

4. Regression Analysis

To formalise the relationship of overall job satisfaction to the constituent parts described above, we can use regression analysis. Table 4 presents the results of a regression of the overall job satisfaction measure on the seven dummy variables described in Section 2. As the dependent variable takes on ordinal values from one to seven (*i.e.* someone with job satisfaction of four is not twice as satisfied as someone with job satisfaction of two), ordered probit regression

techniques have been used[13] . Results are presented for all workers (for whom information on all of Section 2's measures is available), and separately by sex and by age group[14] .

The estimated coefficients show that all seven measures of job quality are significantly correlated with overall job satisfaction. As all of the right-hand side variables are (1,0) dummies, we can directly compare the size of their estimated coefficients. The largest impact on overall job satisfaction comes from having good relations at work, followed by good job content. High income and good promotion opportunities have roughly the same effect on satisfaction, while the smallest (although still significant) effect comes from job security.

It is not possible to compare the estimated coefficients across the equations for men and women, as the underlying distributions of the dependent variable are not the same. However, we can note that the effect of high income on job satisfaction is more significant for men than for women, while the effect of hours is more significant for women. These tie in with men's higher evaluation of income, and lower evaluation of hours, as an important aspect of the job in Table 1. With respect to age, the importance of income seems to rise with age, while that of promotion opportunities falls. Hard work is not correlated with overall job satisfaction for workers aged under thirty, whereas it is for older workers. Across all age groups and both sexes, good relations at work remains the most important predictor of overall job satisfaction.

To aid with the interpretation of Table 4's Ordered Probit estimates, the predicted probabilities of an individual replying "Completely satisfied" (the highest score) or either "Completely satisfied" or "Very satisfied" have been calculated. These are presented in Annex C both for the overall regression in column one of Table 4 and for the separate regressions for men and women. The first row of Annex C shows the predicted probabilities for a "baseline" individual, here defined as having a job with low income, in which do not want to work less, low promotion opportunities, high job security, which is difficult, but with good job content and good relations at work[15] . An individual with this type of job has a 16 per cent probability of being completely satisfied and a 52 per cent chance of being completely or very satisfied. A woman with this baseline job has somewhat higher probability of being satisfied than a man, as can be seen from the separate results by sex.

The effect of the different job quality measures on job satisfaction can then be calculated by changing one of the job's characteristics and seeing how these predicted probabilities change. The largest effects come from giving the job poor job content or bad relations at work. Both of

these cut the probability of being completely or very satisfied from over fifty per cent to just over twenty five per cent. Their effect is of the same magnitude for women and for men. Giving this baseline job high income or high promotion opportunities raises the probability that a worker will be satisfied with it, although the impact is smaller than those for job content or relations at work. Here there is a noticeable difference by sex. Men have a lower probability than women of being satisfied with the baseline job. However, if we add high income, men and women now have an equal probability of being satisfied.

One natural experiment here is to continue with the analysis presented in Table 3 and ask whether income, for example, has a greater effect on job satisfaction when the worker values it highly. This interpretation of job satisfaction as a weighted sum of various different job characteristics, with the weights being provided by the importance which the worker attaches to the aspect in question, comes directly from the definition of job satisfaction proposed by Locke (1976).

Pairs of values and outcomes were tested on a one-by-one basis in Table 4's job satisfaction regression. For example, concerning income, an additional dummy variable was entered representing high income when the worker says income is very important. The dummies for thinking that an interesting job, a job with independence, a helpful job and a useful job are very important are interacted with the Table 4's dummy variable for "Good Job Content", which summarises a number of such job characteristics (see Annex A).

The estimated coefficients from the interaction terms in these eight separate equations are presented in Annex D. The coefficients on the other variables in the regression are unchanged by the introduction of interactions and remain very significant. Five out of the eight interactions tested yield significant results. For example, in the second panel, wanting to work fewer hours is much more strongly associated with lower job satisfaction when the individual says that having a lot of leisure time is very important. Similarly, having a secure job is more strongly associated with higher job satisfaction when the individual values job security as very important. Significant results are also found for having good job content and valuing either of an interesting job, a helpful job or a useful job as very important. These results are consistent with a model where job satisfaction results from a combination of what the job is like, in terms of the characteristics listed in Section 2, and of how much the worker cares about these characteristics.

5. Multiple Deprivation

The previous sections have considered the separate components of a good job and their relation to overall job satisfaction. The current section changes the focus slightly by asking whether an individual who does badly on one aspect of a job is more likely to do badly on another. In other words, are there certain types of workers who experience "multiple deprivation"?

It turns out that the measures of job quality are correlated amongst themselves. For example, from Table 2, across all countries 22 per cent of workers say that their income is high. However, this figure is 46 per cent for those who also say that they have good opportunities for promotion, compared to 15 per cent for those who do not. One way of summarising the relationships between the individual job quality measures is to look at the coefficient of correlation between them. This is presented in Table 5.

The numbers in Table 5 show significant relationships between the seven individual measures: only two out of the twenty one correlation coefficients are not significant at the one per cent level. The odd man out, to some extent, is the desire to work fewer hours, which is correlated somewhat less strongly with the other measures. This may show that the desire to work fewer hours is more a function of the individual than of the job's other qualities. In particular, there is no correlation between wanting to reduce work hours and saying that the job is well-paid.

Although most correlations are significant, they are not noticeably high. The largest correlation coefficient is 0.31 between high income and high promotion, and over two-thirds are less than 0.15 in absolute value. One interpretation is that there may well be a trade-off between certain characteristics, in the manner of a compensating differential. A job might be difficult or boring, but pay well, whereas another might be both easy and boring. This will tend to reduce the correlation between the job quality components.

6. Overall Measures of Job Quality

This last section presents another approach to answering the question "Who's got the good jobs?", taking into account the correlations between the different constituent parts of job quality discussed above.

Two measures of overall Job Quality are presented here. The first is overall job satisfaction, as already discussed in Section 3. The second is based on the seven dummy variables for income, promotion, hard work etc. presented in Section 2. To calculate a composite measure of job quality, the information contained in these seven needs to be combined. One simple way of doing so is to count the number of aspects, out of the seven above, for which an individual has a "good job". The resulting scale runs from zero, for someone whose job is dissatisfying on all seven of the measures listed in Section 2 (*i.e.* in the first seven panels of Table 2), to seven for someone whose job is of "good quality" on all seven measures. Intermediate scores represent the varying degrees of job quality. For want of a better term, this has been called the Job Quality Count. Over the 5 600 individuals for whom all of the relevant information is available, the distribution of this indicator is as follows.

The Distribution of the Job Quality Count

Value	Frequency	Percentage	Cumulative Percentage
0	135	2.41	2.41
1	446	7.96	10.37
2	905	16.15	26.52
3	1272	22.70	49.21
4	1305	23.29	72.50
5	946	16.88	89.38
6	460	8.21	97.59
7	135	2.41	100.00
Total	**5604**	**100.00**	

Both the median and the modal value of this variable are four, and its mean is 3.5. The average worker in this dataset has a job that is of good quality on between three and four of the criteria listed in the first seven panels of Table 2. Minorities of ten per cent have jobs that are of high quality on less than two criteria or more than five criteria out of the seven.

Table 6 reports the results of a regression of these two measures of overall job quality on sex, three age dummies, and country dummies (the omitted category for the latter is West

Germany). This table can be seen as the multivariate equivalent of Table 2. Ordered Probit techniques are used to estimate the Overall Job Satisfaction and Job Quality Count equations[16] (although an argument can be made that the latter variable is cardinal).

The results are consistent across the regressions. For both measures of job quality, males have worse jobs than do women, and workers aged 45 to 65 have jobs of significantly higher quality than do younger workers[17] . The worst jobs, holding the sex- and age-mix of workers constant, are found in Hungary, whereas the best ones are found in Austria and Ireland[18] . It is notable how much worse (in terms of the pseudo-R^2) these regressions of job quality measures on sex, age and country do compared to the regression of overall job satisfaction on the constituent parts of a good job presented in Table 4.

Using the same methodology as in Section 4, a "baseline" worker who is female, aged between 16 and 29 and lives in West Germany, has a predicted probability of 12 per cent of being completely satisfied and 39 per cent of being completely or very satisfied. Changing the baseline person to a male reduces these probabilities slightly to 10 and 35 per cent respectively, whereas increasing her age to between 45 and 65 raises the probabilities to 18 and 50 per cent respectively. Last, the predicted satisfaction probabilities of the baseline worker in Hungary are 5 and 22 per cent, whereas in Ireland they are 17 and 50 per cent.

There are some notable differences in country estimates between the two equations. Ireland, the Netherlands, Norway, the United Kingdom and the United States all do worse on the Job Quality Count than in terms of overall job satisfaction. This could well result from aspects of the job that matter to workers (and which therefore affect job satisfaction) but for which we do not have separate measures in the ISSP data (and which thus do not appear in the Job Quality Count).

7. Conclusion

Nearly twenty five years ago, Flanagan *et al.* (1974) argued persuasively that, to avoid worker discontent, firms need to provide the right mix of wages and non-pecuniary job characteristics. They also noted that the preferred mix likely differs between workers and may change as income rises.

Much of the analysis of the labour market that has appeared since Flanagan *et al.* seems to have paid only scarce attention to the non-wage aspects of a job. One of the findings of this

report is that, on the contrary, nearly seven thousand workers in OECD countries say that the monetary rewards from working come a long way behind other aspects of the job such as job security, job interest, promotion opportunities and autonomy.

Turning from values to outcomes, six broad groups of attributes characterising good jobs were identified: pay; hours of work; future prospects; how hard or difficult the job is; job content; and interpersonal relationships. It was shown that there is a tendency for workers to be in jobs that exhibit qualities the worker thinks are very important; to this extent, there is self-sorting of workers into jobs. All of these outcome variables are shown to be significant components of workers' job satisfaction. One implication is that job satisfaction seems to summarise a great deal of information about jobs that is only rarely measured in surveys. The analysis of job satisfaction information therefore likely provides a useful complement to the standard analysis of wages and worker behaviour.

As these six job attributes are correlated amongst themselves (those doing badly on one measure of job quality being more likely to do badly on others too), two summary job quality measures were proposed. These provided consistent pictures with respect to the distribution of good jobs in the dataset analysed: males have worse jobs than do women, and workers aged 45 to 65 have jobs of significantly higher quality than do younger workers. Workers in Hungary have worse jobs than workers in Austria and Ireland.

One advantage of the approach taken here, which consists in identifying the constituent parts of good jobs, is that it allows us to say which aspects of work are dissatisfying for different groups of workers. This is of importance if, as has been suggested above, (potentially) dissatisfied workers are less likely to participate in the labour market, to stay in their job, and to be productive. In particular, we can use some of the above results to the phenomenon of women's increasing labour force participation: what was satisfying for a largely male workforce may become less so as more women become active in the labour market. Table 2 showed that women are less likely to report high pay and promotion opportunities, but are also less likely to consider their job as difficult. One way of improving women's jobs is thus to make their pay and promotion more like men's. However, Table 1 shows that this is not the whole story. Women attach less importance than men to pay, but more importance to the social aspects of the job (whether it is useful or helps others), and to flexible working hours. The mix of wages and non-pecuniary aspects of the job may need to be revised to reflect women's increasing participation.

A second policy implication concerns the encouragement of continuing participation by older workers (in the context of ageing populations). The differences in job values and outcomes between workers over the age of 45 and those under 45 can be read off from Tables 1 and 2 (the same differences are found comparing the over-55's to the under-55's). Older workers, as is true for all age groups, care the most about job security. Relative to younger workers, they think that leisure time is less important, but that job security and the social aspects of the job are more important. With respect to job outcomes, older workers do relatively badly with respect to promotion opportunities (only 13 per cent of 55-65 year olds rank these as high), but better with respect to hard work and good job content (reported by 47 and 70 per cent of 55-65 year olds respectively). Continued participation by older workers will depend crucially on the individuals concerned finding the jobs on offer attractive; and there is evidence that this attraction may well depend upon a great deal more than wages and hours of work.

Footnotes

[1] A recent summary of the literature linking job satisfaction to behaviour is provided in Warr (1998); an interesting investigation using both individual and national time series data can be found in Flanagan *et al*. (1974).

[2] Some evidence is presented that overall job satisfaction acts as a summary measure of these different aspects of job quality, a number of which are difficult to observe or measure. As such, the use of such satisfaction information may help to explain workers' behaviour better than data on, for example, pay and hours. It is likely that there are trade-offs between wages and some of the other job quality components, which implies omitted variable biases in the estimation of wages.

[3] Israel was also surveyed in 1989, but this data is not used in the current analysis.

[4] The separate job values figures for each of the nine individual countries are presented in Annex B, as are their figures for the job outcome variables which will be discussed in Section 2. The figures by sex and by age within each country turn out to be rather similar, which reduces worries about pooling data from the different countries.

[5] The same similarity in responses is found if we look at the percentage saying a job aspect is very important or important (Table 1 reports the percentage saying "very important" only).

[6] Two characteristics which do not immediately fall into the above taxonomy, but which would seem important are the local environment in which job is located (not of the workplace, but of the region/town/local area), and the degree of work-family conflict, although this may be partly picked up in the different measures of hours of work.

[7] In British data there is no difference in overall job satisfaction between workers with temporary jobs and those with permanent job (see Clark, 1996).

[8] The Eurobarometer survey 44.3 (carried out in February 1996) asked workers in 15 European countries a broad set of questions about which parts of their job they liked and disliked. The data are unfortunately not yet available.

[9] Clark (1996) uses British Household Panel Survey (BHPS) data to show that those who wish to change their hours of work (given their current hourly wage) are, *ceteris paribus*, far less satisfied than are those who are content with their current hours. This is equally true whether the desired change is upward or downward.

[10] Information on time taken to travel to work is contained in the BHPS dataset. It is negatively correlated with several measures of job satisfaction; see Clark (1997).

[11] Some more recent data, in Table 5.1 of OECD (1997*a*), does find higher reported job insecurity in the United States than in most European countries.

[12] More detail on inter-country differences in job satisfaction scores using this dataset can be found in Blanchflower and Freeman (1997).

[13] For ease of representation, the estimated "cut points" (which are used to calculate the probabilities that each individual, as a function of his or her characteristics, will give the answers one through seven) are not presented. The Ordered Probit technique is presented in Zavoina and McKelvey (1975).

[14] The log-likelihood is a measure of how well the model explains the data. The "likelihood" is usually considered to be between zero (for a model which explains nothing) and one (for perfect prediction); the log of the likelihood thus varies from minus infinity to zero. The log-likelihood at zero (or L_0) is that from a model with no explanatory variables (only a constant), whereas the log-likelihood of the model with the explanatory variables included (or L_1) is less negative (*i.e.* the likelihood of the model explaining the data is higher). The pseudo-R^2 is just $1-L_1/L_0$. If the model explains none of the variation in the data then $L_1=L_0$ and the pseudo-R^2 is 0, whereas in the case of perfect prediction $L_1=0$ and the pseudo-R^2 equals 1.

[15] As can be seen from the last column of Table 2, these are the mean characteristics for the sample, in the sense that each of them describes more than fifty per cent of respondents.

[16] For ease of representation, the estimated cut-points for the Ordered Probit equations have been left out of this table.

[17] Most of the econometric work on job satisfaction has found that women report higher levels of job satisfaction than men (for example, Blanchflower and Oswald, 1998; Meng, 1990; Kalleberg and Loscocco, 1983; and Clark, 1997). Older workers are typically more satisfied than younger workers (Warr, 1992 and Kalleberg and Loscocco, 1983), with evidence in the BHPS dataset of a U-shaped relationship between job satisfaction and age, minimising in the mid-thirties (Clark, Oswald and Warr, 1996).

[18] It would obviously be of interest to introduce other variables, such as income and education, here. There are, however, significant problems of inter-country comparability with these variables, rendering such an investigation problematic.

Annex A. Variable Definitions

1) Pay

Income is High. Statements about the respondent's job: My income is high - strongly agree or agree.

2) Hours of work

Would Like to Spend Less Time in Job. Suppose you could change the way you spend your time, spending more time on some things and less time on others. Which of the things on the following list would you like to spend more time on, which would you like to spend less time on and which would you like to spend the same amount of time on as now?

Q.1a Change the way to spend the time: Time in a paid job?

- A bit less time or Much less time

3) Future prospects- promotion and job security

Opportunities for Advancement are High: Statements about the respondent's job: My opportunities for advancement are high - strongly agree or agree.

Job Secure. My job is secure - strongly agree or agree.

4) How difficult is the job?

Hard Work. Based on answers to the six following questions.

How often do you come home from work exhausted?

How often do you have to do hard physical work?

How often do you find your work stressful?

How often do you work in dangerous conditions?

How often do you work in unhealthy conditions?

How often do you work in physically unpleasant conditions?

All of these are coded as:

1. Always
2. Often
3. Sometimes
4. Hardly ever
5. Never

Dichotomous variables were created, with 1 representing Always, Often or Sometimes, and 0 representing Hardly ever or Never. Then the sum of these six dummies was calculated. The resulting variable (which is analogous to the Caseness scale of individual well-being in Psychology) counts the number of times (out of six) the respondent reports a 'bad' outcome with respect to job unpleasantness or difficulty. This variable runs from zero, for those with no such outcomes, to six, for those whose jobs are at least sometimes unpleasant on all of the six criteria above. This method allows six separate, but related, job measures to be combined into one[2] . The distribution of this variable is as follows:

Value	Frequency	Percentage	Cumulative Percentage
0	242	3.64	3.64
1	704	10.59	14.23
2	1986	29.88	44.11
3	1470	22.12	66.23
4	941	14.16	80.38
5	679	10.22	90.60
6	625	9.40	100.00
Total	**6647**	**100.00**	

The majority of workers report jobs which are hard on 2 or 3 measures out of the six. Twenty per cent have jobs which are hard on four or more measures.

Last, a dummy variable was created from this summary measure for those workers reporting three or more such bad outcomes. This dummy hence achieves a value of one for 56 per cent of the sample.

[2] If factor analysis is used to create the first principal component, which is a linear combination of the six measures, all six measures are given almost equal weighting. This supports the simple adding-up inherent in the calculation of the Caseness-type measure. In addition, the results with the individual components were always consistent with those using the summary measure.

5) Job content: interest, prestige and independence

Good Job Content. Based on answers to the six following questions.

How often are you bored at work? This variable has been recoded as follows:

1. Never
2. Hardly ever
3. Sometimes
4. Often
5. Always

Statements about the respondent's job: My job is interesting

Statements about the respondent's job: In my job I can help other people

Statements about the respondent's job: My job is useful to society

Statements about the respondent's job: I can work independently

All coded as:

1. Strongly agree
2. Agree
3. Neither agree nor disagree
4. Disagree
5. Strongly disagree

And which of the following statements about your work is most true?

1. My job allows me to design or plan most of my daily work
2. My job allows me to design or plan parts of my daily work
3. My job does not really allow me to design or plan my daily work

As above, dichotomous variables were created, with 1 representing (for bored at work) Never or Hardly ever, (for the four statement questions) Strongly Agree or Agree, and (for the design of daily work) the designing of most or part of daily work. The sum of these six dummies, which runs from zero to six, is a positive measure of job content. The distribution of this variable is as follows:

Value	Frequency	Percentage	Cumulative Percentage
0	99	1.49	1.49
1	308	4.64	6.13
2	460	6.93	13.06
3	751	11.31	24.37
4	1349	20.32	44.70
5	1747	26.32	71.02
6	1924	28.98	100.00
Total	**6638**	**100.00**	

Almost thirty per cent of workers have jobs which are satisfying on all six content measures; on the other hand a quarter have jobs which are satisfying on three or less measures.

A dummy variable was created from this summary measure for those workers reporting more than four positive personal control, interest and usefulness aspects of their job. This dummy has a value of one for 55 per cent of the sample.

6) Interpersonal relationships

Good Relations at Work. The sum of two dichotomous variables based on answers to the following two questions:

Relations at the respondent's workplace: Between management and employees

Relations at the respondent's workplace: Between workmates / colleagues

Both of these are coded as:

1. Very good
2. Quite good
3. Neither good nor bad
4. Quite bad
5. Very bad

A dummy variable was created for those reporting Very Good or Quite Good relations with both management and with colleagues (68 per cent of the sample). Nine per cent of the sample reported worse than quite good relations with both management and with colleagues, and 23 per cent reported worse than quite good relations with either management or with colleagues but not with both.

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