

Clark, Andrew E.

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## Your money or your life: changing job quality in OECD countries

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Changing Job Quality in OECD Countries**

Andrew E. Clark

May 2005

# **Your Money or Your Life: Changing Job Quality in OECD Countries**

**Andrew E. Clark**  
*CNRS, PSE and IZA Bonn*

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IZA

P.O. Box 7240  
53072 Bonn  
Germany

Phone: +49-228-3894-0  
Fax: +49-228-3894-180  
Email: [iza@iza.org](mailto:iza@iza.org)

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## **ABSTRACT**

### **Your Money or Your Life: Changing Job Quality in OECD Countries**

Job quality may usefully be thought of as depending on both job values (how much workers care about different job outcomes) and the job outcomes themselves. Here both cross-section and panel data are used to examine changes in job quality in OECD countries over the 1990s. Despite rising wages and falling hours, overall job satisfaction is either stable or declining. These movements are not due to changes in the type of workers, nor to changes in their job values. A number of pieces of evidence point to stress and hard work as being strong candidates for what has gone wrong with employees' jobs. We find evidence of increasing inequality in a number of job outcomes. Some groups of workers have done better than others: the young and the higher-educated have been insulated against downward movements in job quality, and there is tentative evidence that trade unions may have protected their members against adverse job outcomes.

JEL Classification: J28, J3, J81

Keywords: job values, job outcomes, job satisfaction, effort

Corresponding author:

Andrew Clark  
PSE  
48 Boulevard Jourdan  
75014 Paris  
France  
Email: [andrew.clark@ens.fr](mailto:andrew.clark@ens.fr)

Paris-Jourdan Sciences Economiques (PSE) is a joint research unit CNRS-EHESS-ENPC-ENS.

# YOUR MONEY OR YOUR LIFE: CHANGING JOB QUALITY IN OECD COUNTRIES

Andrew E. Clark

## 1. Introduction

In terms of labour market outcomes, the 1980s might be thought of as the decade of unemployment. The 1990s saw a return to healthier labour markets (at least in Anglo-Saxon countries). However, while jobs were indeed being created, there was concern about their nature: were the good jobs of the 1960s and 1970s being replaced by bad jobs in the 1990s? To paraphrase, were we facing a phenomenon of goodjob-less growth?

This article asks whether such worries were warranted. On the face of it, there may not seemed to have been much cause for disquiet. Many analyses of the changing nature of jobs restrict themselves to purely monetary criteria, and in this respect developments were reasonably positive in OECD countries. Real wages for full-time workers grew in most countries between the mid-1980s and the mid-1990s, although many countries also experienced a widening of the wage distribution, especially for men (the growth of the top earnings decile being larger than that for the first earnings decile, although both were typically positive). One exception to this general movement was the USA. Here overall real wage growth was only small, and the real wages of men in not only the bottom but also the fifth decile fell between 1985 and 1995 (see Chart 3.3 of OECD, 1996).

Some articles have also made reference to hours of work when discussing job quality. Here there is an obvious secular trend downwards in OECD countries (see OECD, 1998). From the early 1980s onwards, hours of work have fallen in some countries (Japan, Spain, Germany, and France for example), and remained stable in others (Canada and the UK). In only two OECD countries have work hours increased over the period in question: Sweden (from a low level) and the USA.<sup>1</sup>

A third aspect is job security. The conclusions here are less clear. The analysis in OECD (1997) showed, in many countries (including the USA), no sharp movement in retention rates (the percentage of workers in a job at time  $t$  who are still in the same job five years later) between the early 1980s and the mid-1990s. More recent analysis (Green, 2003) of Germany, the UK and the USA finds no robust evidence of increasing job insecurity.

A simple summary of changes in job quality might then be that income has largely risen, and hours largely fallen, while insecurity presents no clear overwhelming trend: job quality has arguably risen. Here I suggest that concentration on income and hours may in fact give a biased picture of what has been happening on the ground, *i.e.* to jobs as experienced by workers themselves. There are many other aspects of jobs which are important, such as job content, autonomy and relations at work, and it is possible that some of these have deteriorated over the 1990s. I therefore examine changes over time in a number of elements of good jobs, not as defined by an outside observer but as reported by workers themselves. As in the theory of compensating differentials, the seemingly free lunch of higher pay and fewer hours might have to be paid for via harder work. I use micro data from a number of OECD countries to look for evidence of a paid lunch: any such trade-off will render the simple summary above untrustworthy.

## **2. Cross-section and Panel Data on Job Quality**

Two datasets are used to examine movements in various measures of job quality over the 1990s. The first, multi-country and repeated cross-section, comes from the Work Orientations module of the International Social Survey Programme, the ISSP (<http://www.issp.org>). This module was run in 1989 and 1997; the third edition is scheduled for 2005. Seven OECD countries were present in both waves: West Germany, Great Britain, the USA, Hungary, Netherlands, Italy and Norway. Keeping only full-time or part-time employees in these seven countries yields a sample of just under 11000 observations, split equally between 1989 and 1997. The number of observations by country and by year are shown in Table 1.

[INSERT TABLE 1 HERE]

Locke (1976) proposed that Overall Job Satisfaction can usefully be thought of as a weighted sum of Job Outcomes, over the different aspects of the job (such as pay, promotion, and security). The weights are the Job Values, which refer to how much workers care about the different job outcomes. The ISSP Work Orientations modules contain information on both job values and job outcomes. With respect to the former, the importance of eight different job characteristics are recorded, using five rankings from "Not at all important" to "Very Important":

*High income; Flexible working hours; Good opportunities for advancement; Job security; Interesting job; Allows to work independently; Allows to help other people; and Useful to society.*

We also have information about job outcomes. As in Clark (2005), and using job quality classifications commonly found in Management and Work Psychology (see Warr, 1999, for example), six broad classes of outcomes are identified:

- Pay;
- Hours of work;
- Future Prospects (promotion and job security);
- How hard, stressful or dangerous the job is;
- Job content: interest, prestige and independence; and
- Interpersonal relationships.

These job outcomes are measured using self-reports from workers; in addition we have objective information on income and hours of work. The resulting outcome variables are described in detail in the Appendix.

The second dataset, the British Household Panel Survey (BHPS), is single-country and panel. This general survey covers a random sample of approximately 10,000 individuals in 5,500 British households per year. Twelve waves of data are currently available. This data set includes a wide range of information about individual and household demographics, health, labour force status, employment and values. There is both entry into and exit from the panel, leading to unbalanced data. The BHPS is a household panel: all adults in the same household are interviewed separately. The wave one data were collected in late 1991 - early 1992, the wave two data were collected in late 1992 - early 1993, and so on. More details are available at <http://www.iser.essex.ac.uk/bhps/>. Around 5000 employees are interviewed per year in the BHPS.

Job values information in the BHPS is available in Waves one and nine (1991 and 1999). All those in work are asked: “*Here are aspects of a job that people say are important. I'd like you to look at this card and say which is the most important to you about a job*”. The job aspects concerned are: Promotion prospects; Total pay; Good relations with manager; Job security; Using initiative; Actual work; Hours worked; and Something else. Job outcome variables in the

BHPS mainly come from self-reports of job satisfaction. Five job satisfaction questions were asked of those in employment over all twelve waves: Satisfaction with Pay, Hours, Work Itself, and Job Security, followed by a question regarding overall job satisfaction. Finally, we have information on whether, given their current hourly pay rate, workers would prefer to work more hours, fewer hours, or the same hours.

The analysis here is based on changes in both job values and job outcomes over the 1990s. Some may feel that what individuals say about their jobs is not useful information. In particular, economists have insisted on the primacy of behaviour over self-reports. Two counter-arguments can be raised. First, by looking at changes in job values and job outcomes, we compare movements over time in responses to the same questions. Second, it may well be the case that even cross-sectional data on subjective variables contain useful information. A small body of research in economics and psychology has considered these questions by relating the cross-section distribution of satisfaction scores to subsequent observable labour market behaviour. Perhaps the most obvious expected correlation is with quits: workers who are dissatisfied (in cross-section data) should be more likely to quit in the future (if job satisfaction can be compared between individuals). Freeman (1978) uses American panel data to show that job satisfaction is indeed a strongly significant predictor (often more so than are wages) of quits. This finding has been replicated in other American data (Akerlof, Rose and Yellen, 1988, and McEvoy and Cascio, 1985), German data (Clark *et al.*, 1998) and British data (Clark, 2001). Further research has found that job satisfaction is negatively correlated with absenteeism (Clegg, 1983) and positively correlated with productivity (Patterson *et al.*, 1997); a useful summary is provided in Warr (1999). Clark (2003) shows that mental stress scores on entering unemployment predict unemployment duration. Finally, Clark (1997) suggests that dissatisfying jobs may discourage labour force participation. As such, the changes in the distribution of both job values and job outcomes will be taken in what follows as revealing underlying labour market phenomena.



### 3. Job Values

One of this article's principal hypotheses is that changes in income and hours alone are insufficient to describe movements in overall job quality. It is reasonable to ask how we can be sure that this is the case. A simple approach is to actually ask workers themselves what they believe to be important: this is the method followed here.

Respondents in the ISSP rank the importance of eight different job characteristics, from "Not at all important" to "Very Important". Note that this is an absolute rather than a relative ranking: it is possible to class all eight characteristics as very important. The (weighted) percentage describing each job characteristic as "Very Important" in the ISSP data is shown in the top panel of Table 2. Separate results are presented for 1989 and 1997, and for men and women. The asterisks show whether the movements over time are significant.

[INSERT TABLE 2 HERE]

There are three main conclusions from this table. In seven OECD countries over the 1990s, employees overall do not rate income and hours as the most important aspects of a job. The two job aspects which stand out with high scores are job security and job interest, followed by independence. Second, there is remarkable consistency between men and women with respect to what is important in a job. Last, job values are stable between 1989 and 1997 in the ISSP, for both men and women. There is slight evidence that extrinsic rewards have become less important, but most figures barely change over time.

The second dataset, the BHPS, also contains information on job values, with questions asked in Waves one and nine. As noted in Section 2, this is not an absolute, but a relative values question: respondents choose the first most important job aspect out of eight choices on a showcard. The weighted raw numbers are shown in the bottom panel of Table 2. As was the case for the ISSP data, these numbers refer to full-time or part-time employees only.

Over the 1990s pay became more important, while job security became less important for British employees. The other job values are more stable, although there are smaller movements in the importance of initiative (upwards) and the actual work (downwards) for women. Again, there is fairly close fit between the responses of men and women. As the BHPS is panel data, we can correct for composition effects by comparing the answers of the same individual in 1991 and

1999. This is carried out by a logit regression for finding the value in question the most important, with the right-hand side variables being a dummy for “1999” and the respondent’s age (panel respondents being eight years older in 1999 than in 1991). This equation is estimated only on those who completed questionnaires at both waves one and nine. Perhaps remarkably, the results from this analysis are almost exactly the same as in the raw data in Table 2. British employees became somewhat more materialistic (in terms of values) over the 1990s.

In addition to stability over time, it is useful to look at stability across regions. It might be thought that both job outcomes (what happened?) and job values (how much does it matter?) reflect local labour market conditions. It turns out that this is true for job outcomes, but less so for job values. Only job security and initiative as values are correlated (positively and negatively respectively) with the local unemployment rate in regression analysis. As such, individuals’ labour market values seem fairly stable.<sup>2</sup>

How much faith can we put in what workers say? One check is to see whether alternative approaches yield similar rankings. Two other methods have been used in the empirical literature. The first uses domain satisfaction variables to predict quits (Clark, 2001) or self-employment duration (Georgellis *et al.*, 2005), both using BHPS data. The second decomposes overall job satisfaction as a function of domain satisfactions or outcomes, such as pay, hours, job security, and relationships; this is the approach taken by Kalleberg and Vaisey (2005) and Van Praag and Ferrer-i-Carbonell (2004), using a sample of American Union members and BHPS data respectively. Both approaches produce broadly similar rankings of the importance of key job characteristics.

#### **4. Job Outcomes**

Section 3 concluded that the 1990s did not see sharp movements in job values: can the same be said about job outcomes? The evolution of job outcomes over the 1990s has been at the centre of a number of recent contributions.<sup>3</sup> Studies of the UK have pointed to increasing effort (Green, 2001), falling discretion (Gallie *et al.*, 2004), and deteriorating mental wellbeing and job satisfaction through the 1990s (Gardner and Oswald, 2001). German evidence finds rising work intensification and falling discretion and job satisfaction between the mid-1980s and 2001 (Green and Tsitsianis, 2005), while Jürges (2004) emphasises ambiguous movements in job components over the same period (less monitoring and exposure to pollution, and greater

opportunities to learn on the job; but rising work stress and deteriorating relations with colleagues). Blanchflower and Oswald (1999) show that job satisfaction trends gently downwards over time in the United States (for the over-30s).

Among multi-country studies, Green and McIntosh (2001) underline the rise in work effort 1991-1996 in European Survey of Working Conditions data, finding that effort rose the most where trade union density fell the most. Using later data, Gallie (2005) finds no evidence of rising work pressure in EU-15 countries over the period 1996-2001.

#### *Average job outcome variables by year*

The ISSP contains information on many types of job outcomes. These are listed in the top panel of Table 3, and described in detail in the Appendix. They are not meant to be exhaustive, but they do cover many aspects of a job that are not consistently picked up by general surveys. Arguably, other important, unmeasured, aspects of a job will be reflected in the summary measure in the last row: overall job satisfaction.

[INSERT TABLE 3 HERE]

The top panel of Table 3 shows the (weighted) percentage of employees in the ISSP data with the job outcome in question. Separate figures are presented for men and women, and for 1989 and 1997. The figures show that the desire to reduce hours of work increased over the 1990s (and the desire to increase hours of work fell). In addition, reported job security fell over this period (see OECD, 1997) and the percentage of women reporting hard work rose somewhat. However, both sexes report better job content, and the percentage of employees reporting that they are very or completely satisfied in their current job in the last row (“high job satisfaction” corresponds to responses of six or seven on a one to seven scale) is similar in 1989 and 1997.

The job outcome measures in the BHPS mostly refer to reported levels of job satisfaction, as well as desired hours of work. All of these are ordinal, rather than cardinal. The exact wording is “*I’m going to read out a list of various aspects of jobs, and after each one I’d like you to tell me from this card which number best describes how satisfied or dissatisfied you are with that particular aspect of your own present job*”. Responses run from one (Not satisfied at all) to seven (Completely satisfied). Four domain satisfaction measures are consistently recorded over

all twelve waves of the BHPS: Total Pay; Job Security; the Work Itself; and Hours Worked. These domain questions are followed by a question on overall job satisfaction (“*All things considered, how satisfied or dissatisfied are you with your present job overall using the same 1 - 7 scale?*”). The hours preference variable comes from the question “*Thinking about the hours you work, assuming that you would be paid the same amount per hour, would you prefer to: work more hours, work fewer hours, or continue with the same hours?*”. The showcard for the job satisfaction questions was changed from Wave One to subsequent waves, leading to some doubts as to the comparability of responses over time. We therefore drop Wave One from the subsequent analysis.

The bottom panel of Table 3 shows average job satisfaction and hours preference scores for 1992 and 1999 (in order to be as close as possible to the years for which job values are recorded in Table 2). The figures show that, for both men and women, average satisfaction with security rose, while satisfaction with the work itself fell. Hours preferences moved away from more hours towards fewer hours. Pay satisfaction rose for men, while hours satisfaction fell for women. Average overall job satisfaction fell significantly in BHPS data for both sexes between 1992 and 1999. To this extent, Great Britain is something of an outlier compared to the OECD average figures in the top panel of Table 3, where job satisfaction was flat, and perceived job security declined.

### *Regression Analysis*

It can be argued that bivariate correlations such as those in Table 3 do not provide conclusive evidence. Changes in job outcomes could reflect demographics, such as the aging of the labour force, rather than the changing nature of jobs. We take this into account by using multivariate analysis, regressing the job outcome variables in both datasets on standard demographic controls, including year dummies.

Table 4 shows one set of job quality regressions: those pertaining to overall job satisfaction in the ISSP. A standard set of demographic controls are introduced. In addition, there are country dummies, and a dummy variable for 1997. It is this latter which will pick up changes in job quality over the eight-year period between the two ISSP surveys, conditional on the other right-hand side variables. In other words, this regression shows whether overall job satisfaction

is higher in 1997 than in 1989, holding the structure of the workforce constant in terms of variables such as sex, age, and education.

There are two separate specifications: one with and one without wages and hours. This is for two reasons. First, practically, wage data are not available for the Netherlands in 1997, and hours are not available for Hungary in 1989. Second, it is also independently of interest to ask if an employee with the same hours of work and real salary was more or less satisfied in 1989 than in 1997 – this question is answered in column 2 of Table 4.

[INSERT TABLE 4 HERE]

We find standard demographic results in the job satisfaction equation (see Clark, 1996): men are less satisfied; older employees and the married are more satisfied. There is no significant correlation between education and job satisfaction. A number of the country dummy variables are significant: *ceteris paribus*, employees in Hungary, Great Britain and Italy report relatively lower values of job satisfaction, in that order. The low job satisfaction of Hungarian workers was previously noted by Blanchflower and Freeman (1997) and Ritter and Anker (2002).

What interests us most in this table is the estimated coefficient on the 1997 variable: this reveals whether the “average” employee found their job more or less satisfying in 1997 than in 1989. This coefficient is negative, but insignificant, in column 1, where income and hours are not controlled for. Across these OECD countries between 1989 and 1997, income rose and hours of work decreased; however the average employee is no more satisfied in 1997 than she was in 1989. The estimated coefficient on the year dummy is negative and significant in column 2: an employee with the same income and hours is less satisfied in 1997 than in 1989.

Table 5 summarises analogous results for the other measures of job outcomes in the ISSP data. The first row reproduces the estimated coefficients on the 1997 year dummy from Table 4. The data shapes are remarkably consistent across the two regression specifications, and in fact are very close to those found in the raw data in Table 3. The hours preferences variable is ordered (more hours, no change, fewer hours), so that higher values indicate a relative desire for greater hours of work. The negative estimated coefficient on “1997” shows that hours preferences fell over this period (so that employee preferences shifted towards wanting fewer

hours of work). Equally feelings of job security fell between 1989 and 1997 across these seven OECD countries, and the percentage saying that their job was hard rose. With both demographic controls, and income and hours, we find in addition that those reporting high income fell (what was a high income in 1989 was less so in 1997), and overall job satisfaction fell. Last, there is no significant change in job content 1989-1997 in Table 5. This suggests that the significant movements in job content in Table 3 resulted from demographic movements in the labour force, underlining the importance of regression in addition to bivariate analysis.

[INSERT TABLE 5 HERE]

The overall conclusion from Table 5 is that, in these seven OECD countries, there is little evidence of rising job quality in the 1990s, despite positive movements in hours and pay. If anything, a number of measures of job quality have trended downwards.<sup>4</sup>

This section finishes with similar regression analysis of the BHPS data. The first column of Table 6 shows the results from ordered probit estimation of pooled BHPS data; this essentially treats every observation as if it came from a different individual. The second column explicitly recognises that the same individuals are interviewed every year in panel data, and shows the results from a “Within” regression. This analyses the difference between the response the individual gives at one point in time and the average reply she gives over all the waves of data. By looking at this difference, these regressions assume the cardinality of the job satisfaction score. However, qualitatively similar results can be obtained from fixed effects logit regressions, which require the dependent variable to be recoded to (1,0), and which therefore omit a lot of information.

[INSERT TABLE 6 HERE]

We obtain standard results in Table 6 for education, marriage, age and sex. Job satisfaction minimises at about age 40 in the pooled regression. There is a negative correlation between job satisfaction and firm size (as in Idson, 1990, and Frey and Benz, 2004). We also have strong sector effects: Local Government workers are more satisfied than Private sector workers (the omitted category), who are themselves more satisfied with their jobs than Central

Government workers; those working in the NHS or Education sectors are amongst the most satisfied employees, *ceteris paribus*. The relation between satisfaction and the public sector is explored using European panel data in Clark and Senik (2005). The regressions in Table 6 do not control for hours or income.

What is most interesting in the context of this article are the estimated coefficients on the wave dummies, which appear at the top of Table 6. The estimated coefficients in both the pooled and the panel results tell the same story: there has been a secular decline in overall job satisfaction over the 1990s. The estimated coefficients are jointly very significant in both columns. The Graphs in Figure 1 illustrate this decline for both overall job satisfaction and the five other job outcome measures (with the latter being analysed using regressions similar to those in Table 6). There are two lines in each graph: the first shows the pooled cross-section estimate on the wave dummies (tracking how job satisfaction changed for the average employee in each year); the panel line effectively plots out the change in the job satisfaction scores reported by the same employees from one year to the next.

[INSERT FIGURE 1 HERE]

Both overall job satisfaction and hours preferences move downwards between 1992 and 2002. There is an issue of interpretation of the hours preference figures: here they are considered as an indirect measure of how much employees like their jobs. An alternative interpretation of the downward movement is simply in terms of labour supply with rising real wages, *i.e.* a backward-bending labour supply curve. However, it is worth remembering that the figures in this graph do not refer to actual hours, nor to desired hours, but rather to desired changes in the level of hours. The four remaining graphs in Figure 1 show the time trends in the four domain satisfaction scores. There is a sharp difference in the movement in these domain satisfaction measures over the 1990s. One of them (pay<sup>5</sup>) moves upwards, while job security satisfaction increases in pooled but not panel data. Hours satisfaction is essentially flat, while satisfaction with the work itself moves inexorably downwards.<sup>6</sup> Movements in income and hours are not behind the profiles in Figure 1: very much the same results are found in regressions which control for income and hours.

The story from both the ISSP and BHPS is therefore one of at best flat job quality over the 1990s, despite rising income and falling hours (and at constant income and hours, job quality is unambiguously lower). The following section considers whether these movements have been the same for everyone, or if there is (increasing) heterogeneity in job outcomes.

## **5. Inequality in Job Outcomes**

Much attention has been paid to increases in income inequality in OECD countries, with some subsidiary interest in rising hours inequality (see Green, 2001, for some UK evidence regarding the latter). This section therefore starts with a simple question: have job outcomes become more unequal over the 1990s? To answer this question, the Index of ordinal variation is used (Berry and Mielke, 1994), which provides a measure of variability for ordinal variables. The analysis of this Index using the ISSP data shows that there is somewhat greater dispersion in some job outcome measures in 1997 than in 1989. This applies particularly to job security and to overall job satisfaction.

The same analysis can be carried out for job outcomes in the BHPS. As in the ISSP, there is evidence in Britain that job quality has become more unequal over the 1990s. There is a small rise in the index of ordinal variation (more inequality) pre-1997 to post-1997 for overall job satisfaction, satisfaction with hours, and hours preferences; there are sharp rises (just under 0.1 for a measure that is bounded between zero and one) for satisfaction with pay and satisfaction with job security.

An alternative take on the question of inequality consists in looking for differences in the evolution of job outcomes between different groups. In the ISSP, a natural starting point is the country, and the aggregate analysis in Section 4 turns out to conceal large differences between countries. Table 7 below shows the estimated changes in overall job satisfaction across the seven countries. These are taken from the regressions in the first column of Table 4, but with added interaction terms between the country dummies and the 1997 year dummy. The estimated coefficients show that some countries did better than others (Netherlands and the USA), while others have done far worse (Hungary). It is particularly striking that jobs in the USA actually became more satisfying over the 1990s.<sup>7</sup>

[INSERT TABLE 7 HERE]



Similar analyses using the other job outcome variables in Table 5 reveal that it is income, promotion and job content which rose for the Netherlands, and job content for the USA. For the losers, job security moved downwards massively in Hungary, and everything moved downward in Great Britain. Last, while some job aspects, such as income, job security and hard work, showed movement in most countries, job relations did not: there is thus no evidence that relations at work worsened in these countries over the 1990s.

Are the country changes in Table 7 related to country characteristics? Some significant correlations are found, despite the small number of observations. The change in overall job satisfaction is positively correlated with average job satisfaction in 1989 (with a correlation coefficient  $\rho > 0.8$ , significant at the five per cent level): the countries where jobs improved the most already had better jobs to start with. This is consistent with the increase in inequality noted above. There is also evidence ( $\rho > 0.8$ ) that changes in job quality are pro-cyclical: the greater the rise in unemployment 1989-97, the smaller the rise in overall job satisfaction. Last, there is suggestive evidence that changes in job satisfaction are negatively correlated with changes in trade union density (the correlation is significant at just over the ten per cent level; this analysis excludes Hungary, for which the change in trade union density is not available).

We now consider different demographic groups. This investigation is carried out using interactions between demographic variables and the 1997 year dummy in the regressions carried out in Table 4. The results show that the lower-educated and older workers (over 45) have seen the greatest deterioration in their jobs. The latter should be borne in mind in the context of the greying of the labour force.

Which groups did better than others in the BHPS data? We can quantify the change in overall job satisfaction over the 1990s by regressing the estimated year dummy coefficients against year (there are thus eleven observations): this calculates the average slope of the “pooled” lines in the graphs in Figure 1. For the whole sample, this produces a negative estimated coefficient (so that job satisfaction trends downwards), with a t-statistic of 3.2.

This slope is not the same for all groups of workers, however, as can be seen by running Table 6’s regressions separately for different demographic groups. Table 8 shows the estimated slope coefficient for the change in job satisfaction over the 1990s (multiplied by 100, for ease of comparison). These are not particularly meaningful in an absolute sense, but should be

considered in terms of both their relative size (to each other) and their sign. As the year coefficients are not data, but estimated, the significance of the year-slopes is evaluated using bootstrap techniques.

[INSERT TABLE 8 HERE]

The main findings from overall job satisfaction (in column 1) are that there has been no decline in overall job satisfaction for men, for those under 45, or for the highly-educated; correspondingly there have been sharp falls for women, those with less than high education, and older workers. There is however no difference in the job satisfaction decline between the private and public sectors. The decline in job satisfaction is also similar for union members and union non-members, although the decline is slightly greater for non-members. To this extent, the union job satisfaction gap might have closed a little over the 1990s.<sup>8</sup> One reading of this finding is that unions have succeeded in ensuring that their members, who might be considered as potentially more vulnerable, have done overall just as well (or just as badly) as non-members over the 1990s.

The domain satisfaction trends tell interesting stories. Pay satisfaction has improved for everyone, and particularly for private and non-union workers. Satisfaction with security has also improved for everyone, but there are huge differences in the size of the rise. The biggest gains have been for union members and in the public sector. Hours satisfaction has moved downwards, especially for older workers. Last, satisfaction with the work itself has moved sharply downwards, especially for older employees.

One marked development in the British economy over the 1990s was the substantial fall in unemployment. What is the relation between unemployment and job quality? The regional unemployment rate, when included in the regressions, attracts a negative and significant coefficient (except for satisfaction with the work itself, where it is insignificant). Job quality, as measured in the BHPS, is largely pro-cyclical: better jobs are found in tighter labour markets.

This section has shown that changes in job satisfaction have not been the same for all workers. The challenge is then to identify labour market developments over the 1990s which can explain both the country distribution of job satisfaction changes in Table 7 and the demographic distribution of changes within countries.

In answer to the question “what’s gone wrong with workers’ jobs”?, the ISSP suggests job security and hard work; the BHPS emphasises “the work itself”. The latter can cover a multitude of phenomena. A spate of recent papers have attempted to uncover the relationship between human resource management variables and workers’ job satisfaction. Bauer (2004) uses 2000 data from the European Survey of Working Conditions, and finds a positive correlation between job satisfaction and autonomy and communication; there is however little correlation with respect to team work and job rotation. Lorenz *et al.* (2004) use the same data, and combine all of the HRM variables to classify four management styles. Job satisfaction is shown to be highest in the “discretionary learning” system, characterised by learning opportunities and autonomy. In terms of the four EU-15 countries in both waves of the ISSP, discretionary learning is shown to be more prevalent in the Netherlands, and less prevalent in the UK and Italy: this is the country ordering found in Table 7.

In single-country studies, Bradley *et al.* (2004) model satisfaction with pay in the UK using CERS and WERS data, and find positive correlations with training and autonomy, but a negative correlation with close supervision. Mohr and Zoghi (2004) use Canadian CWES data to conclude that job enrichment is generally positively correlated with job satisfaction and does not lead to increased stress. There is however another literature which has linked “new” HRM practices to occupational injuries (Askenazy, 2001).

Which variable may then have generally trended downwards in Europe, but not in the USA (so as to explain flat or falling job satisfaction in Europe, and rising job satisfaction in the USA)? Candidates include autonomy, learning and effort. These variables are all difficult to measure. In the ISSP data, there is no evidence that answers to the question “*I can work independently*” changed overall or within each country over the 1990s. In the British context, it may also seem unlikely that on-the-job learning has deteriorated quickly enough over the 1990s to explain the sharp fall in overall job satisfaction in Figure 1.

With respect to effort, both Green (2001) and Green and McIntosh (2001) find evidence, from subjective data, of increasing work effort in the UK. An alternative is to look at evidence of occupational illness or injury. Stress and musculoskeletal disorders rose in the UK over the 1990s, although some work-related illnesses (*e.g.* deafness and asthma) fell (see <http://www.hse.gov.uk/statistics/overall/ohsb0304.pdf>). Askenazy (2004) shows that musculoskeletal problems have risen hugely in Europe; he considers these as indicators of work

stress. In the USA, these problems rose until the early-mid 1990s, but have since declined. This pattern is consistent with the changes in job satisfaction in the ISSP.

It would also be useful to consider country changes in stress at work in the ISSP between 1989 and 1997. Unfortunately the question was not asked in one of the countries that most interests us in this respect, the USA, in 1997. It is, however, noticeable that stress at work did not increase in the Netherlands, which is the other country where overall job satisfaction rose between 1989 and 1997.

Last, if stress at work is indeed the culprit, then the demographic patterns in its evolution should match those found in overall job satisfaction. Although experiments with different age groups were inconclusive, it is striking that three of four of the components of hard work (see the Appendix) moved in a more favourable manner for both men and for the high-educated: this is consistent with the job outcome trends in the BHPS summarised in Table 8.

## **6. Conclusion**

What has happened to job quality in OECD countries over the 1990s? The analysis of job values and job outcomes over the 1990s in repeated cross-section and panel data leads to three broad conclusions. First job values have been mostly stable, so that they are unlikely to explain movements in overall job satisfaction. Second, overall measures of job outcomes are either flat or falling, despite favourable movements in hours, wages, and (to an extent) job security. These movements are not due to changes in the type of workers: controlling for demographics, and panel analysis in the BHPS, does not change the qualitative conclusions.

The third conclusion is that there is evidence of increasing inequality in some measures of job outcomes, as revealed by the index of ordinal variation. Not all groups have had the same experience in the labour market: in both the ISSP and BHPS, the young and the higher-educated have been insulated against downward movements in job quality. There has been no further erosion in the job satisfaction gap between union members and non-members in Great Britain. However, union members have fared better with respect to job security and hours of work. In the ISSP there is some tentative evidence that falls in trade union density are associated with diminishing job quality.

Job outcomes are pro-cyclical, being systematically poorer in high unemployment areas. However, labour market tightness and job quality are not synonyms, as the British experience

over the 1990s has illustrated. In Great Britain, the cyclical rise in job quality that would have been predicted from a tighter labour market has been completely swamped by a secular decline.

The task for research would now seem to be the identification of the precise mechanism that lies behind this deterioration. Domain satisfaction scores give us some clues about what might have happened. Satisfaction with both pay and job security have improved, while satisfaction with hours is flat. It is satisfaction with the work itself that has moved sharply downwards. If good jobs are indeed being replaced by bad jobs, it would seem to be at least partly due to changes in job content: what individuals actually do when they are at work. Although it is difficult to conduct exact tests, a number of pieces of evidence point to stress and hard work as being at least an important part of what has gone wrong.

In this context, two final points should be borne in mind. First, there has been a degree of heterogeneity in the experience of British employees: the job satisfaction of men, younger workers, and highly-educated workers did not fall over the 1990s. Second, it would seem useful to appeal to cross-country comparisons. In the ISSP, not all employees have recorded falling satisfaction. In particular, overall job satisfaction rose in the Netherlands and the USA. Whatever the causes of falling job quality in Britain turn out to be, employees in other countries have seemingly managed to avoid them.

## Acknowledgements

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## Endnotes

<sup>1</sup> Bell and Freeman (2001) offer an incentive-based interpretation: hours of work have risen with inequality, with the latter being interpreted as the future rewards from promotion.

<sup>2</sup> One obvious following question is “Where do job values come from”? This is not addressed here. The BHPS does contain some information about parents’ occupational activity when the respondent was aged 14: this activity and the respondent’s values may well be correlated.

<sup>3</sup> Trends in job satisfaction among employees do not necessarily inform about population trends in overall life satisfaction. In Great Britain, this has been flat over the past thirty years (see [http://www2.eur.nl/fsw/research/happiness/hap\\_nat/findingreports/TrendReport2004-1.pdf](http://www2.eur.nl/fsw/research/happiness/hap_nat/findingreports/TrendReport2004-1.pdf)).

<sup>4</sup> Some may feel uneasy about the bundling together of different job elements in Caseness-style scores (this applies to Hard Work, Job Content and Relations at Work). As a check, these items were unbundled and each element was analysed separately. The results are largely consistent with those presented in Table 5. The only subtlety is that unchanged “job content” hides downward movements in finding the job interesting or the job useful over the period 1989-1997.

<sup>5</sup> I have no explanation of the spike in pay satisfaction in 1998. The minimum wage was introduced in 1999.

<sup>6</sup> While I was writing this article, a story in the *Guardian* (3<sup>rd</sup> September 2004) referred to a dispute over the claimed “irrelevance” of unions. Looking only at pay and security does paint a rosy picture of the employee’s lot. The reply of the General Secretary of the Transport and General Workers Union was that “(in) the real world ... we are all working harder for longer. Modern workers need union representation more than ever”. Figure 1 bears witness to rising dissatisfaction with job content and (to an extent) hours of work.

<sup>7</sup> This is consistent with the hours preference figures. Americans work long hours, but express less desire for lower hours than do Europeans. An interpretation is that American employees particularly like their jobs.

<sup>8</sup> The lively literature on job satisfaction and unions includes Bryson *et al.* (2004), Clark (2001), Guest and Conway (2004), Hersch and Stone (1990), Heywood *et al.* (2002), and Tsuru and Rebitzer (1995). Ritter and Anker (2002) report that unionisation is positively correlated with job satisfaction in Hungary and the Ukraine.

## Appendix. ISSP Variable Definitions

### **1) Pay**

*Objective measure:* Respondent's monthly gross earnings, converted to US dollars using Purchasing Power Parities from the OECD. All figures are expressed in real 1989 values by deflating for US CPI inflation (<ftp://ftp.bls.gov/pub/special.requests/cpi/cpiiai.txt>). Data from West Germany, the Netherlands, Italy and Hungary is expressed in net terms and have been converted to gross using the OECD tax database

([http://www.oecd.org/document/60/0,2340,en\\_2649\\_34897\\_1942460\\_1\\_1\\_1\\_1,00.html](http://www.oecd.org/document/60/0,2340,en_2649_34897_1942460_1_1_1_1,00.html)).

Comparable figures for this conversion only exist from 2000 onwards, and the 2000 figures are used here. There is a question whether these are relevant for 1989. In particular, could the negative 1997 year coefficient in the right-hand side of Tables 4 and 5 reflect miscalculation of gross income in 1989? As a check, I allowed the average tax rates in the four countries concerned by the net-gross conversion to be ten percentage points lower in 1989 than the value retained for 1997. These are very large hypothetical changes. The new estimation results were very similar to those in Tables 4 and 5, leading me to conclude that changes in tax rates were unlikely to be behind the changes in job quality estimated here.

*Subjective measure: Income is High.* "My income is high" - strongly agree or agree.

### **2) Hours of work**

*Objective measure:* Weekly hours of work.

*Subjective measure: Would Like to Spend Less or More 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"?

- A bit less time or much less time in a paid job (overwork variable)
- A bit more time or much more time in a paid job (underwork variable)

### **3) Future prospects- promotion and job security**

*Opportunities for Advancement are High:* 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 following four questions. How often do you:

- come home from work exhausted?
- have to do hard physical work?
- find your work stressful?
- work in dangerous conditions?

All of which are coded as:

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

Cronbach's alpha statistic is a way of evaluating the reliability of an additive scale created over a number of items. It measures the correlation between the scale and the underlying factor. The alpha statistic over these four elements is 0.62. Dichotomous variables were created, with 1 representing Always, Often or Sometimes, and 0 representing Hardly ever or Never. The sum of these four dummies (analogous to the Caseness scale of individual well-being in Psychology) counts the number of "bad" job outcomes with respect to difficulty. The value zero corresponds to no bad outcomes, and four to jobs which are at least sometimes unpleasant on all of the criteria above. A dummy variable was created for workers reporting three or more such bad outcomes. The stress at work question was not asked in the USA in 1997.

### **5) Job content: interest, prestige and independence**

*Good Job Content.* Based on answers to the following four questions.

- *My job is interesting*
- *In my job I can help other people*
- *My job is useful to society*
- *I can work independently*

All of these are coded as:

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

Cronbach's alpha over these four elements is 0.73. Dichotomous variables were created, with 1 representing Strongly Agree or Agree. The sum of these four variables is a measure of good job content. A dummy variable was created for workers reporting positive job content on all four aspects.

### **6) Interpersonal relationships**

*Good Relations at Work.* 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

Cronbach's alpha over these two elements is 0.66. A dummy variable was created for those reporting Very Good or Quite Good relations with both management and with colleagues.



**Table 1. Number of employees interviewed in OECD countries: 1989 and 1997 ISSP data.**

	<b>1989</b>	<b>1997</b>
West Germany	622	648
Great Britain	675	545
USA	838	800
Hungary	641	626
Italy	586	475
Netherlands	681	1018
Norway	1305	1366
<b>Total</b>	<b>5348</b>	<b>5378</b>

**Table 2. Job Values.**

<b>ISSP 1989-1997</b>					
<b>Job Values: Percentage Saying "Very Important"</b>					
	<b>Women</b>			<b>Men</b>	
	<b>1989</b>	<b>1997</b>		<b>1989</b>	<b>1997</b>
High Income	19.6	18.2		23.6	21.0 *
Flexible Working Hours	20.3	20.2		14.6	15.5
Good Opportunities for Advancement	23.0	20.2	*	24.3	20.1 **
Job Security	58.7	57.7		55.5	55.4
Interesting Job	47.9	47.8		45.3	46.9
Allows to Work Independently	29.1	31.3		33.4	33.4
Allows to Help Other People	23.4	25.3		16.5	16.8
Useful to Society	25.5	23.9		21.8	16.8 **

<b>BHPS 1991-1999</b>					
<b>Job Values: Percentage Saying Characteristic is the Most Important</b>					
	<b>Women</b>			<b>Men</b>	
	<b>1991</b>	<b>1999</b>		<b>1991</b>	<b>1999</b>
Promotion Prospects	2.1	2.4		3.6	3.3
Total Pay	13.6	19.1	**	19.1	25.7 **
Good Relations with Manager	10.8	11.3		4.8	5.1
Job Security	24.0	17.9	**	35.6	31.1 **
Using Initiative	7.5	9.9	**	9.3	10.1
Actual Work	34.4	31.4	*	24.1	21.9
Hours Worked	6.0	6.3		1.2	1.2
Something Else	1.6	1.6		2.5	1.6 *

Notes: Weighted Data; \*\* (\*) = significant difference by year at the one (five) per cent level.

**Table 3. Job Outcomes.**

<b>ISSP 1989-1997</b>						
<b>Job Outcomes: Percentage Reporting the Characteristic in Question</b>						
	<b>Women</b>			<b>Men</b>		
	<b>1989</b>	<b>1997</b>		<b>1989</b>	<b>1997</b>	
Income is high	15.8	16.7		25.6	25.3	
Prefer to spend less time in their job	33.7	40.3	**	36.2	41.5	**
Prefer to spend more time in their job	13.5	9.9	**	11.4	10.8	
Opportunities for advancement are high	17.6	17.9		24.3	23.0	
Job is secure	71.8	66.4	**	70.9	64.7	**
Hard work	35.4	39.2	*	49.6	48.1	
Good job content	40.6	46.1	**	38.3	41.6	*
Good relations at work	67.0	66.9		65.1	63.8	
High job satisfaction	39.0	39.7		37.7	37.6	

<b>BHPS 1992-1999</b>						
<b>Job Outcomes: Average Satisfaction and Hours Preferences</b>						
	<b>Women</b>			<b>Men</b>		
	<b>1992</b>	<b>1999</b>		<b>1992</b>	<b>1999</b>	
Satisfaction with Pay	4.93	5.00		4.56	4.82	**
Satisfaction with Security	5.30	5.48	**	4.88	5.27	**
Satisfaction with Work Itself	5.78	5.44	**	5.54	5.31	**
Satisfaction with Hours	5.54	5.30	**	5.05	4.97	
Overall Satisfaction	5.75	5.40	**	5.27	5.17	*
Prefer to work fewer hours (%)	27.3%	31.9%	**	32.5%	38.4%	**
Prefer to work more hours (%)	10.9%	7.0%	**	8.7%	6.5%	**

Notes: Weighted Data; \*\* (\*) = significant difference by year at the one (five) per cent level. See the Appendix for the definition of the ISSP job outcome variables.

**Table 4. Overall Job Satisfaction Regressions. ISSP 1989-1997.**

	<b>Standard</b>	<b>With income and hours</b>
1997	-0.032 (0.022)	-0.069* (0.027)
Male	-0.068** (0.021)	-0.149** (0.029)
30 to 44	0.028 (0.028)	0.016 (0.036)
45 to 65	0.158** (0.030)	0.123** (0.038)
Married	0.102** (0.024)	0.089** (0.030)
Years of Education	-0.002 (0.003)	-0.007 (0.005)
Earnings (\$000) per month		0.071** (0.016)
Hours per week		0.003* (0.001)
West Germany	-0.012 (0.038)	-0.024 (0.041)
Great Britain	-0.097* (0.038)	-0.084* (0.040)
USA	0.139** (0.035)	0.124** (0.038)
Hungary	-0.452** (0.038)	
Netherlands	0.109** (0.035)	
Italy	-0.086* (0.039)	-0.119** (0.044)
Observations	10041	6468
Log-Likelihood	-14301.93	-9302.44
Log-Likelihood at zero	-14467.97	-9366.07

Notes: Standard errors in parentheses. \* significant at 5%; \*\* significant at 1%.

**Table 5. Estimated Changes over Time in Various Job Outcome Measures.**  
**ISSP 1989-1997.**

	Estimated Coefficient on "1997"	
	<i>Standard</i>	<i>With income and hours</i>
Job satisfaction	-0.032 (0.022)	-0.069* (0.027)
Income is High	-0.042 (0.022)	-0.088** (0.028)
Hours Preferences	-0.094** (0.022)	-0.094** (0.028)
Opportunities for advancement are high	-0.010 (0.022)	-0.034 (0.028)
Job is secure	-0.213** (0.022)	-0.189** (0.028)
Hard work	0.131** (0.024)	0.159** (0.032)
Good job content	0.007 (0.023)	0.005 (0.029)
Good relations at work	0.014 (0.026)	0.047 (0.033)

Notes: Standard errors in parentheses. \* significant at 5%; \*\* significant at 1%. Hours preferences: workers would prefer to work more hours, fewer hours, or the same hours. Fewer hours is coded as 1, the same hours is coded as 2, and more hours is coded as 3. The regressions include the same control variables as those reported in Table 4.

**Table 6. Overall Job Satisfaction Regressions. BHPS 1992-2002.**

	<b>Pooled</b>	<b>Panel</b>
1993	-0.079* (0.033)	-0.165** (0.042)
1994	-0.127** (0.033)	-0.241** (0.054)
1995	-0.142** (0.033)	-0.256** (0.069)
1996	-0.116** (0.032)	-0.231** (0.085)
1997	-0.067* (0.032)	-0.195 (0.103)
1998	-0.171** (0.032)	-0.278* (0.121)
1999	-0.204** (0.031)	-0.355* (0.139)
2000	-0.206** (0.031)	-0.333* (0.157)
2001	-0.169** (0.031)	-0.307 (0.178)
2002	-0.200** (0.032)	-0.362 (0.197)
Male	-0.208** (0.010)	
Age	-0.061** (0.003)	-0.009 (0.021)
Age-Squared/100	0.079** (0.004)	0.014 (0.010)
High Education	-0.208** (0.014)	
Medium Education	-0.153** (0.013)	
Separated	0.005 (0.031)	0.121* (0.047)
Divorced	-0.040* (0.017)	0.028 (0.039)
Widowed	0.056 (0.040)	0.099 (0.103)
Single	-0.116** (0.014)	-0.094** (0.033)

Central Government	-0.098** (0.023)	0.046 (0.049)
Local Government	0.083** (0.015)	0.250** (0.035)
NHS/Higher Education	0.079** (0.019)	0.261** (0.043)
Nationalised Industry	-0.264** (0.049)	-0.076 (0.070)
Non-Profit	0.128** (0.027)	0.272** (0.047)
Army	-0.010 (0.066)	-0.185 (0.130)
Other	0.252** (0.051)	0.199** (0.067)
Firm Size < 25	0.174** (0.012)	0.046* (0.020)
Firm Size 25-199	0.042** (0.011)	-0.004 (0.018)
Temporary Job	-0.151** (0.018)	-0.106** (0.026)
Region Dummies (19)	Yes	Yes
Number of Children Dummies (4)	Yes	Yes
Occupation Dummies (9)	Yes	Yes
Constant		5.867** (0.634)
Observations	56639	57277

Notes: Standard errors in parentheses. \* significant at 5%; \*\* significant at 1%

**Table 7. Change in Overall Job Satisfaction by Country. ISSP 1989-1997.**

<b>Country</b>	<b>Change in Job Satisfaction</b>
West Germany	-0.044
Great Britain	-0.132**
USA	0.116**
Hungary	-0.423**
Netherlands	0.183**
Italy	-0.052
Norway	-0.026

\*\* = Significantly different from zero at the one per cent level.



**Table 8. BHPS Time Trends in Satisfaction Scores.**

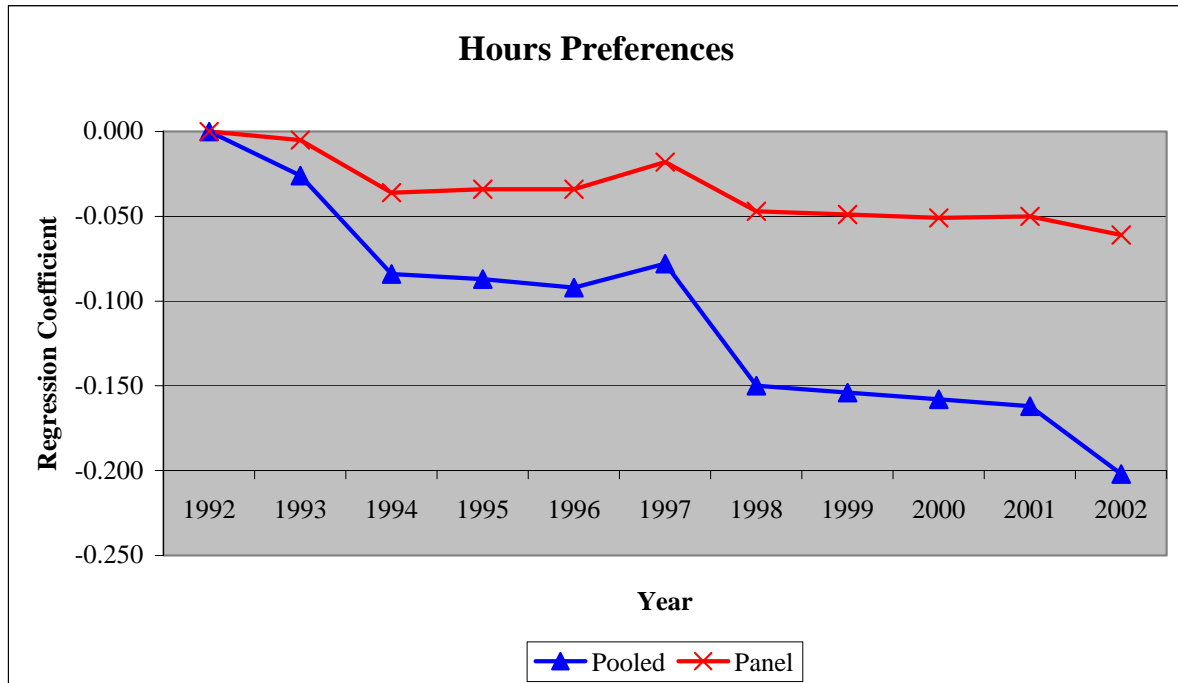
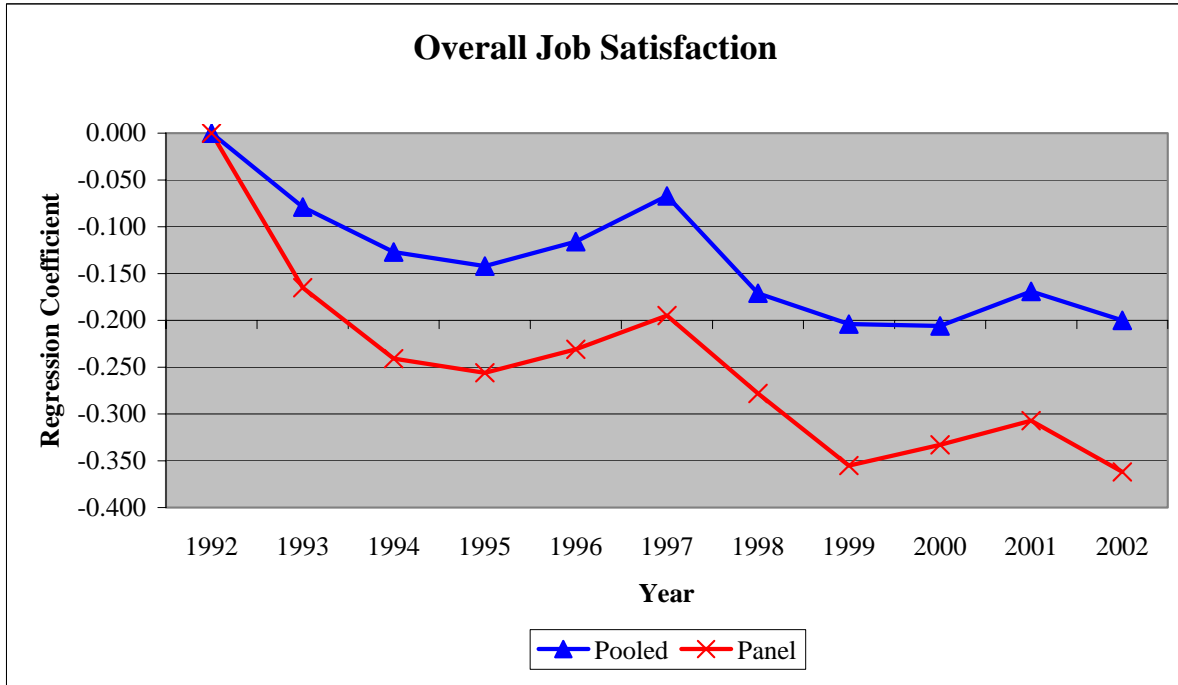
	<b>Overall</b>	<b>Pay</b>	<b>Security</b>	<b>Work Itself</b>	<b>Hours</b>
All	-1.26	2.69	2.72	-2.27	-0.92
Not High-Educated	-1.79	2.81	1.98	-2.32	-1.21
High-Educated <sup>+</sup>	-0.46*	2.55	3.83	-2.27	-0.52*
Female	-2.06	2.31	2.10	-2.83	-1.43
Male	-0.38*	3.21	3.34	-1.71	-0.30*
Age < 45	-0.65*	3.11	3.06	-1.59	-0.09*
Age 45+	-2.90	1.63	1.83	-4.15	-3.08
Not Trade Union Member	-1.29	3.14	1.57	-2.43	-0.36*
Trade Union Member	-1.18	2.23	5.43	-2.53	-1.88
Not Private Sector	-1.34	1.67	5.38	-2.99	-1.52
Private Sector	-1.23	3.14	1.43	-1.98	-0.61*

Notes: The figures in each cell show the estimated change per year (multiplied by 100) in different measures of job satisfaction for the group in question. These figures come from the estimated year coefficients in job satisfaction regressions.

<sup>+</sup> High-education is defined as holding a degree, a teaching qualification, or some other higher qualification.

\* The time trend is not significantly different from zero in bootstrapped analysis (1000 replications).

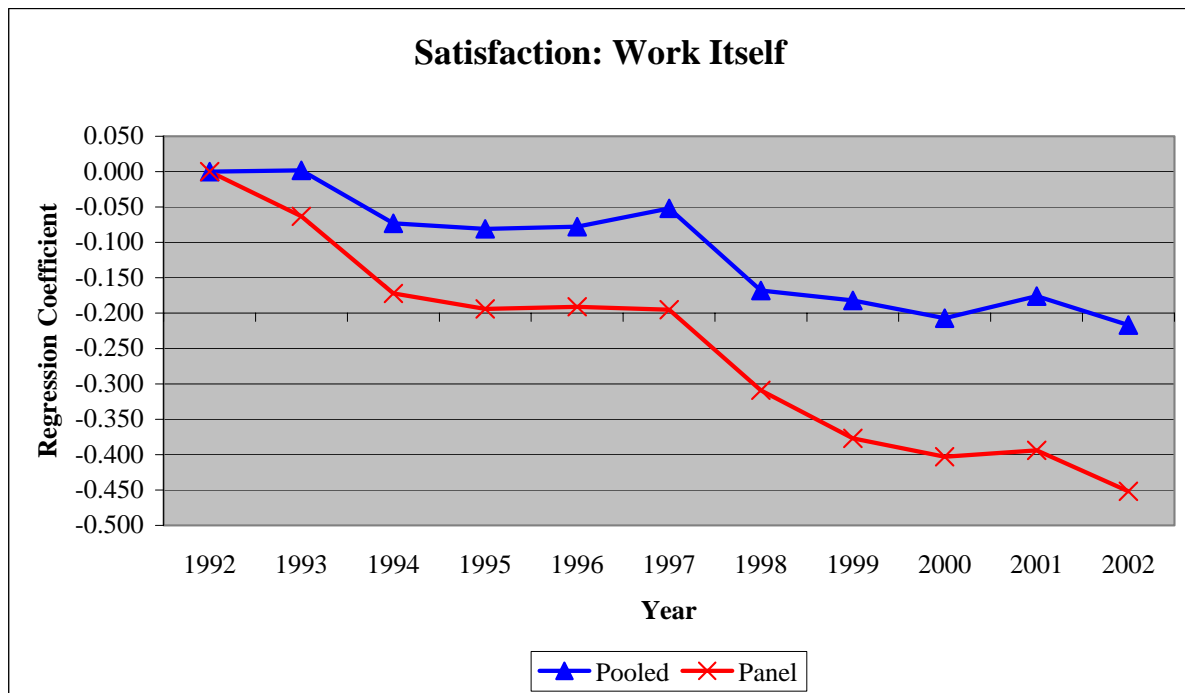
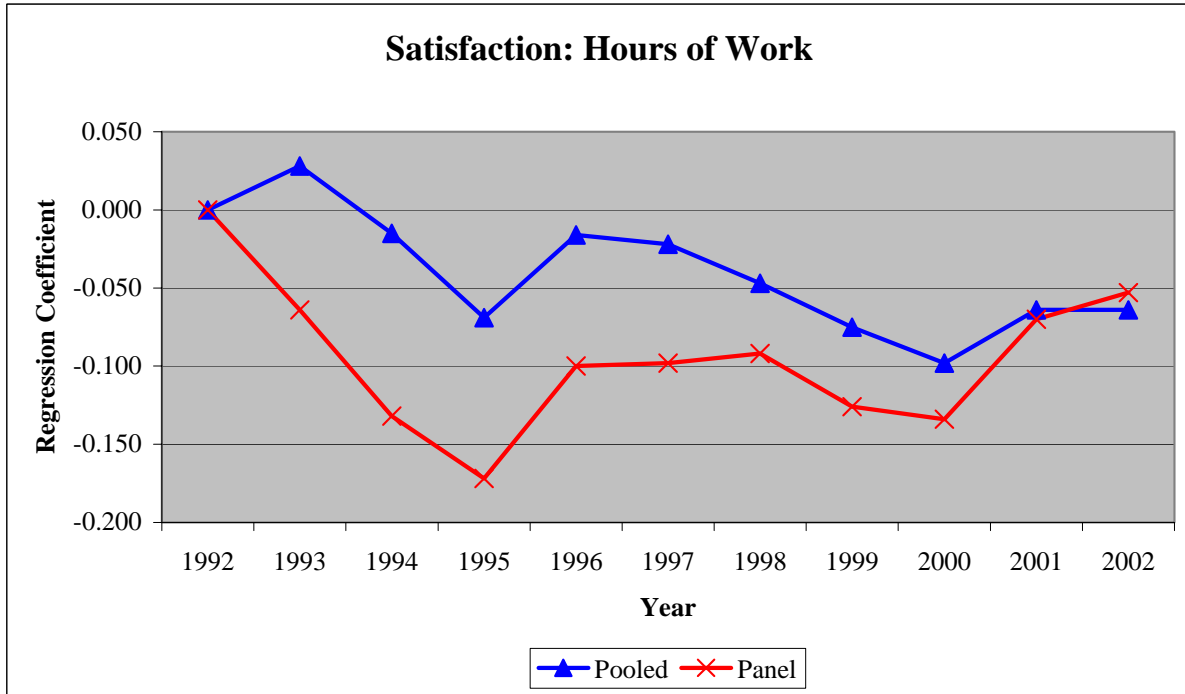
**Figure 1. Estimated Year Effects: BHPS 1992-2002**



**Figure 1. Estimated Year Effects: BHPS 1992-2002:- Continued**



**Figure 1. Estimated Year Effects: BHPS 1992-2002:- Continued**



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