

WORK, JOBS AND WELL-BEING ACROSS THE MILLENIUM

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Thanks for the invitation to speak at this conference. I am an OECD Old Boy, and an even older Economics of Subjective Well-Being researcher. It is very nice to see the two in the room at the same time.

One first thing to note. These results are based on data from the ISSP Work Orientations survey. This is a revolving module of the ISSP survey, which first appeared in 1989, and then in 1997. The third “wave” of the data (although this is actually repeated cross-section, and not panel) was collected in 2005. Together with the OECD, we asked OECD countries who are members of the ISSP to supply us with their 2005 data early, as it is not due out officially until the end of this year. Most did so. We would therefore like to underline that

We are very grateful to the individual ISSP member countries who were able to help us with this project. We are also grateful to the ISSP secretariat for their support in encouraging members to cooperate. The analysis of this data was carried out specifically for this conference. All results are based on preliminary (and not official) data, and should be compared with those from the official integrated file which will be released later in 2007.

Subjective well-being has arguably been moving into the mainstream in Economics over the past ten years. One measure of the success of this insertion is the number of published articles in the domain. An ECONLIT search for journal articles with either ‘Happiness’, ‘Life Satisfaction’, ‘Well-being’ or ‘Job Satisfaction’ in the title, identifies 614 published articles between 1960 and

2006. Of these 363 (59%) have been published since 2000. We have thus moved (in Economics) from a period pre-2000 where one “well-being” article (by this count) was published every two months to a new regime where more than one is published every week.

A number of these papers have addressed policy issues. Sometimes these concerned fairly specific problems, such as the rationality of smokers’ choices (Gruber and Mullainathan, 2006) or the compensating differential for aircraft noise (Van Praag and Baarsma, 2005). A wider separate literature has broadly asked the question “What makes a good life?”. Contributions along these lines include Di Tella and MacCulloch (2006), Layard (2005), and Kahneman *et al.* (2004).

This paper aims to contribute to this policy debate, but more particularly in the world of work. There have now been a number of papers using different datasets across different countries to answer the question: *What matters in life?* There have been a number of attempts to measure this. Individuals rank domains of their life such as income, family, marriage, leisure, housing, job, friendship and health. The category “job” comes towards the top of this ranking. A recent careful econometric analysis is in Ferrer-i-Carbonell and Van Praag (2004). In addition, individuals spend a great deal of time at work: arguably almost more than they spend on “doing” any other particular thing.

I am going to ask three particular questions in this presentation, although I will concentrate on answering only one of them:

- ❖ How important is it to have a job (especially when you want one)?

- ❖ What is it that really matters (for your job satisfaction) within the job you have? And how have all of these characteristics been changing over the past twenty years in OECD countries?
- ❖ Is there anything particular about self-employment in OECD countries?

The approach taken here will be doggedly subjective. To find out about workers' jobs, and what it is that they like and don't like about them, I am going to use the answers that they give to just these kind of questions. In particular, one measure of job quality will be overall job satisfaction: whether the individual is satisfied or not with their job on a one to seven scale.

Although it is probably fair to say that there is no unanimity on the usefulness of subjective well-being information in Economics, there is probably greater willingness to pay attention to such measures now than there has been in the past. There is now quite a mini-industry of validation studies of "what people say", including work showing that what people say today is a strong predictor of what they will do in the future (using panel data): life expectancy, morbidity, productivity, quits, absenteeism, unemployment duration, and marriage duration. Were their responses today to be total noise, no such relationship would be found.

I will answer most of these three questions using the three separate waves of the ISSP survey that deal with work. However, I am not going to be able to deal with the first question in this way. Here I would like to know the effect of employment, and unemployment, on some measure of psychological well-being. Unfortunately, the ISSP, for all of its advantages, does not include a measure of life satisfaction or overall psychological functioning. To establish the

relationship between work and well-being, I am going to turn to European ECHP data and British BHPS data.

1) *Working and Well-Being*

We might imagine that one of the most important facets of work in terms of individual well-being is whether the individual has a job or not, when they want one. Along with the relationship between income and happiness, the role of unemployment in individual well-being has been something of a mainstay in the Economics literature. Unemployment is strongly negatively correlated with various measures of well-being. Figure 5 illustrates with data from the ECHP, between 1994 and 2001, where average life satisfaction (on a 1-6 scale, with 6 being the most satisfied) is plotted against labour force status.

The unemployed score, on average, two points lower than do those in employment or self-employed, which is a very large difference on a six-point scale. This negative relationship persists in regression analysis which controls for the level of income (for example, Clark and Oswald, 1994, and Winkelmann and Winkelmann, 1998): as such, the main effect of unemployment would seem to be non-pecuniary.

Figure 1 shows that the well-being of the unemployed is smaller than that of the employed. Is that so unsurprising? Can we conclude, for policy purposes, that *ceteris paribus* putting the unemployed in work will raise “National Well-Being”? There are three reasons that might make us pause for thought at this juncture:

A) It is not unemployment that makes people unhappy, it is the unhappy who become unemployed. In this reverse causality argument, putting the unemployed

back into work wouldn't necessarily make them any better off. In panel data, however, where we follow the same individual over time, well-being does rise when the unemployed find a job (and when the employed lose their jobs), so this argument does not seem to entirely explain the well-being gap due to unemployment.

B) It depends which unemployed you put back in work (1). What if individuals "get used" to unemployment? There has been a lot of work in Economics and Psychology on whether individuals adapt over time to new circumstances, such that the longer-run effects of unemployment are milder than their short-run effects. In the limit, the long-term unemployed might be just as happy as the employed, if they adapt completely. If there is habituation, then we should concentrate our fire on the short-term unemployed, as the well-being returns from employment are larger for this group. Econometric analysis using panel data (see results in Clark *et al.*, 2006, extended to a number of different countries in Clark, 2006) show that in fixed effect regressions there is no evidence of adaptation to unemployment for men (although there is some evidence for women).

C) It depends which unemployed you put back in work (2). Are there social comparisons with respect to unemployment? Does my own unemployment hurt less the more unemployment there is around? As above, we should then concentrate on moving those back into work who live in low unemployment regions (they suffer the most). This is a rather anti-egalitarian solution with respect to unemployment, although it is egalitarian with respect to subjective well-being. Clark (2003) used the first seven waves of the BHPS to show that unemployment does indeed hurt less the more there is of it around. The graphs in Figures 2 and 3 illustrate the main results. Figure 2 shows the bivariate relationship between psychological well-being (as measured by the GHQ-12

score) and regional unemployment. The “caseness” measure of GHQ runs on a scale of 0 to 12, coded here so that 12 means better psychological functioning. The vertical axis measures the difference in GHQ score between the employed and the unemployed: it is therefore a measure of how much worse off the average unemployed person is than the average employed person (or of the average psychological cost of unemployment). This figure has been calculated separately for each of the seven data waves, and for each of the 11 different standard regions in Great Britain (as listed in the note underneath the graph), producing 77 data points in all. The figure on the horizontal axis shows the LFS unemployment rate, by region and by year. Figure 2 suggests that the psychological cost of unemployment is smaller in regions where the regional unemployment rate is higher. This analysis can be formalised by running multivariate regressions of well-being on own unemployment, regional unemployment, and the interaction between the two, as well as a host of other standard socio-demographic control variables. The results of such regressions are summarised in Figure 3, which provides the predicted well-being levels of individuals in different kinds of labour market situations. The left-hand side panel of Figure 3 refers to the relationship between well-being and regional unemployment. The first bar refers to an individual in work (E) in a region with a five per cent unemployment rate. This individual is predicted to have a 60 per cent probability of having high well-being. Moving this employed individual to a region with a higher (10%) unemployment rate slightly reduces their well-being. The relationship is the other way round for the unemployed. An unemployed individual in a region with a 5% unemployment rate is predicted to have a 31% chance of having high well-being; moving this unemployed individual to a region with higher unemployment actually increases their well-being (to a figure of 38%). This result concords with findings on suicide and

para-suicide rates by the unemployed, which are highest in low unemployment regions (see Platt and Tansella, 1992). The right-hand panel repeats this analysis, but for a much tighter reference group: the individual's spouse. The analysis refers to couples who are both active in the labour market. There are four possible outcomes, given by the combinations of employment and unemployment between the individual and her spouse. The first column shows the probability of high well-being for a worker with an employed spouse (58%); this probability falls to 56% for the employed whose spouse is unemployed. The worst situation is not when both individual and her partner are unemployed, as perhaps might have been imagined, but rather when the individual is unemployed and her partner works.

From now on, I concentrate only on those who are working, and only on the three waves of the ISSP data. The next section considers the various characteristics of jobs that can be measured within the ISSP dataset, and how they have been changing over time.

2) What Makes a Good Job, and Have Jobs Been Improving in OECD Countries?

This is the main part of the presentation. The analysis here is based on the OECD countries present in the three waves of the ISSP. Actually that's not true. To try and keep the project manageable (and because we were concentrating on changes over time), we only tried to collect data for the 2005 ISSP OECD countries that were present in the 1997 ISSP survey as well.

Table 1 shows the distribution of countries, together with the number of people interviewed, for the three ISSP waves. As you can see, we got hold of the

majority of countries in 2005. I can explain the holes privately to anyone who is interested afterwards.

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 can use the answers to these questions to see whether job quality can usefully be summarised by information on earnings and hours (and perhaps job security), as is sometimes proposed, or whether other domains of working might be equally (or even more) important. The results across the three ISSP waves are presented in Table 2. This table has five columns. The first three present job value information in 1989, 1997 and 2005 for respondents in those five countries which participated in all three ISSP waves (West Germany, Great Britain, USA, Hungary and Norway: see Table 1). The last two columns present average figures for the 14 countries which were present in both ISSP waves 1997 and 2005.

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. Table 2 shows the (weighted) percentage describing each job characteristic as "Very Important". The asterisks show whether the movements over time are significant.

The results are remarkably consistent between men and women. There is no movement in the importance of income, but the value of flexible working hours has risen somewhat. Promotion opportunities have become more important. The (much vaunted) aspect of “job security” is still top-ranked, but in 2005 the percentage who say that this is very important is significantly lower than in 1997. The percentage who think that independence is very important has increased, but the largest movements come with respect to arguably the most difficult to measure aspects of a job: whether it is helpful and whether it is useful. It can be countered that there is a social desirability reason for people to agree with these categories (although only half as many do as with job security), but we are here looking at **movements** in the percentages that agree that these aspects are very important.

We now consider movements in actual job outcomes over the past 16 years in OECD countries. We identify six broad classes of outcomes:

- ❖ 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: the details of the construction of the indices are supplied in the Appendix (of the paper that I haven't written yet).

The ISSP information on job outcomes is shown in Table 3. These are not exhaustive, but they do cover many different job aspects not consistently found in other surveys. Other unmeasured job aspects will be picked up in the summary measure in the last row: overall job satisfaction. 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, 1997 and 2005.

The figures show that (subjective) income rose, while the desire to reduce hours of work rose for women but stayed the same for men (as if we were on the backward-sloping part of the labour supply curve for women). Promotion opportunities rose for both sexes. Job security is of great interest, given the amount of ink that has been spilled. Reported job security fell sharply from 1989 to 1997, but has then made a recovery. This recovery has been total for women, but only partial for men. Towards the bottom of the tables, job content has improved for women, and relations at work have improved for men.

Overall, the picture looks fairly rosy between 1997 and 2005: everything that has changed significantly has changed in a positive direction. This is reflected in the percentage who report high job satisfaction (corresponding to responses of six or seven on the one-to-seven scale) which have risen significantly.

Table 3 presented bivariate correlations, which are inconclusive. Changes in job outcomes could reflect composition effects (such as older workers; and satisfaction rises with age), rather than the changing nature of jobs. The key question regarding changes over time is whether satisfaction has risen because

of changes in the type of people doing jobs, or changes in the kind of jobs they do. Policy in this area is arguably about changing the latter rather than the former (although the former will undoubtedly respond to changes in the latter). We address this issue using regression analysis, using standard demographic controls, as well as country and year dummies. These latter will pick up changes in job quality over the three waves of the ISSP surveys, conditional on the other right-hand side variables. The regressions show whether job quality moves over time, holding the structure of the workforce constant in terms of variables such as sex, age, and education. There are two separate specifications: one without and one with wages and hours. The latter asks if an employee with the same hours of work and real salary has become more or less satisfied over time. Table 4 shows the results from overall job satisfaction regressions in the ISSP.

We find that men are less satisfied, and older employees and the married are more satisfied. A number of the country dummy variables are significant: *ceteris paribus*, employees in Hungary, Japan and France are miserable; the “winners” are workers in Denmark (the omitted category), the USA and Spain. What interests us most in this table is the estimated coefficient on the 1997 and 2005 dummy variables: these reveal whether the “average” employee found their job better in later waves than in 1989. In the left-hand panel of Table 4, which shows the three-wave evolution, job satisfaction fell from 1989 to 1997, but has now more than recovered. When income and hours are controlled for, satisfaction in 2005 is the same as in 1989 (for the five countries for which we can carry out this calculation). Part of the rise in job satisfaction would then seem to come from higher income and lower hours of work (this is why column 1 differs from column 2; and column 3 differs from column 4).

A previous paper dealt with evidence of declining job satisfaction in OECD countries across the 1990s. These current (preliminary) numbers would seem to provide some of the first evidence of a fairly generalised recovery.

Table 5a repeats this exercise for the seven “domain” satisfaction mechanisms. For ease of representation, only the estimated coefficients on the time dummies are shown; all regressions include the same control variables as in Table 4. The first line shows the estimated coefficients in an overall job satisfaction regression, which are the same as those in Table 4. Perhaps of most interest in this summary table is the last column, which shows how job quality has changed in 14 OECD countries between 1997 and 2005. The numbers show that income has risen, that workers’ preferences have shifted towards working fewer hours, and that promotion, job security and relations at work have all improved. On the contrary, “hard work” has risen, and “job content” has become less good. Overall, the net effect, as in Table 4 and the top line of Table 5a, is that job satisfaction has risen.

Table 5b repeats this analysis, but this time controlling for hours and income. Table 5a asked the question whether the average worker, given their demographic characteristics, has become more satisfied over time. Table 5b asks whether the average worker, given their demographic characteristics, and the same income and hours of work, has become more satisfied over time. As income has risen and hours of work have fallen in general across OECD countries, we expect the positive movements to be muted in Table 5b, and this is indeed the case. The story in Table 5b is roughly the same as that in Table 5a.

Table 6 presents separate results by country. These are not particularly useful,

mainly due to small sample sizes in most countries. It is of interest to note that Hungary, despite its low ranking in OECD countries, has shown improvement since 1989 and since 1997. There has been, if anything, a trend towards better jobs in Anglo-Saxon countries (Germany, USA, Canada, Great Britain) more than elsewhere.

The paper so far has detailed movements in different job outcome variables. What it has not done is prove that these are in some way important for individual job satisfaction. Table 7 remedies this oversight. Here overall job satisfaction is regressed on the various individual job quality measures (as used in Tables 5a and 5b), as well as standard demographics and year and country dummies. The results show that all of the domain variables are indeed correlated with overall job satisfaction. So that we can say that any movements in them over time will count in changing overall job quality.

What is more difficult to do is establish a ranking over the different right-hand side variables in Table 7. While research on ranking different life domains (health, job, marriage etc.) is able to draw on standardised questions (“*How satisfied are you with your X on a scale of one to seven*”), there is no such standardised scale which we can use to read off the relative contribution of high income and job relations, or of job content and hard work.

3) *What’s Special About Self-Employment?*

This last topic considers the specific role of self-employment in determining job quality. The self-employed are something of an enigma, as they arguably do worse on many domains of job quality. Specifically, they typically earn less but work more hours, are arguably more insecure and face greater risks. On the plus

side, they do certainly enjoy more autonomy, but enjoy relatively less social contact (people don't like being with their co-workers very much, with their boss even less, but worst of all is being on your own). But oddly enough they typically tend to report higher levels of overall job satisfaction.

One interpretation of this fact is that there are unmeasured aspects of the self-employed's jobs which are really very good. The question then arises of why more of the employed are not becoming self-employed, given that the latter seems to be a preferable state of affairs.

The phenomenon is illustrated in Table 8. This shows, in the left-hand panel, the evolution of the percentage of the ISSP sample who are self-employed (expressed as a percentage of all those working). As the ISSP samples are quite small (Table 1), the number of self-employed per country per wave is small, and these percentages should be taken as illustrative. Although there are some countries where the percentage of self-employed has been rising, the broad picture is one of a small fall in the self-employment rate. This conclusion is confirmed by the analysis of comparable LFS data in OECD (2005).

The right-hand side panel of Table 8 shows the evolution of the percentage of respondents who, in response to the question: "*Suppose you were working and could choose between different kinds of jobs. Which of the following would you personally choose?*" replied "*Being self-employed*" rather than "*Being an employee*". This percentage has also been falling across the three waves of the ISSP. However, what is most interesting perhaps is that the percentage who express a preference for self-employment is systematically three or four times higher than the actual self-employment rate. Taking Table 8 at face value, there

are substantial numbers of people who would prefer to be self-employed but who are currently employees.

The correlation between self-employment and overall job satisfaction is detailed in Table 9. Here I have added a self-employment dummy to the regressions detailed in Table 4. The results in columns 1 and 3 show that in both the long and the short dataset the self-employed are happier at work. In columns 2 and 4, I add an interaction between self-employment and the year dummies to see if the effect of self-employment on well-being at work has changed at all between 1989 and 2005. There is no significant evidence of any evolution in the five countries observed between 1989 and 2005. However, for the 14 countries observed between 1997 and 2005, the interaction of self-employment and 2005 is positive and significant. So, in the larger sample of countries, self-employment is not only good, but getting better.

This poses something of a problem. If job satisfaction is higher when self-employed, and growing, why is the number of self-employed falling? One interpretation of the job satisfaction differential is in terms of matching on the labour market. Some people may really like autonomy but not dislike risk that much: they end up self-employed. Others like autonomy less, but really dislike risk: they end up employed. It is easy to parameterise utility functions such that those who choose self-employment are more satisfied than those who choose employment. However, in this matching or sorting story, the employed do not want to become self-employed: they would be even less happy than they are now if we forced them to change from employment to self-employment.

The matching story then does well in explaining why the job satisfaction of the

self-employed is higher than that of the employed in equilibrium. It does a much less good job of explaining the right-hand side of Table 8: the employed shouldn't want to be self-employed (because they have freely chose employment), yet that is what it looks like they want to do.

The alternative reading of Table 8 is that there are barriers to entry: some people really want to be self-employed but can't. These barriers are often imagined in terms of difficulties in raising the necessary capital to start one's own business. This has been demonstrated by careful work showing that individuals are more likely to become self-employed after they have received a windfall gain (inheritance or lottery win): see Blanchflower and Oswald (1998). The only consistent reading of Tables 8 and 9 is then that barriers to entry have become greater with respect to self-employment over time. This would seem worthy of further research, both via subjective and objective data. Specifically, it would seem important to carry out careful country-by-country analysis to try and establish in which countries the "returns" to self-employment have risen, and see whether this ties in with what we know about access to capital.

Conclusion

Employment is better than unemployment. This doesn't seem to result from reverse causality.

There is little evidence that individuals get used to unemployment.

There is evidence that individuals compare their unemployment to that of relevant others: unemployment hurts less the more there is of it around. Greater equality in social welfare then goes hand-in-hand with greater inequality in unemployment.

Even despite all of the above, the average difference in well-being between the employed and the unemployed is large: these are perhaps marginal arguments.

In ISSP data, job values are quite stable over time. Increasing importance given to useful and helpful jobs.

After dropping between 1989 and 1997, job quality seems to have risen between 1997 and 2005. Overall job satisfaction is now higher than it was in 1989.

Most aspects of a job have improved over the past eight years. Exceptions are working hard and job content.

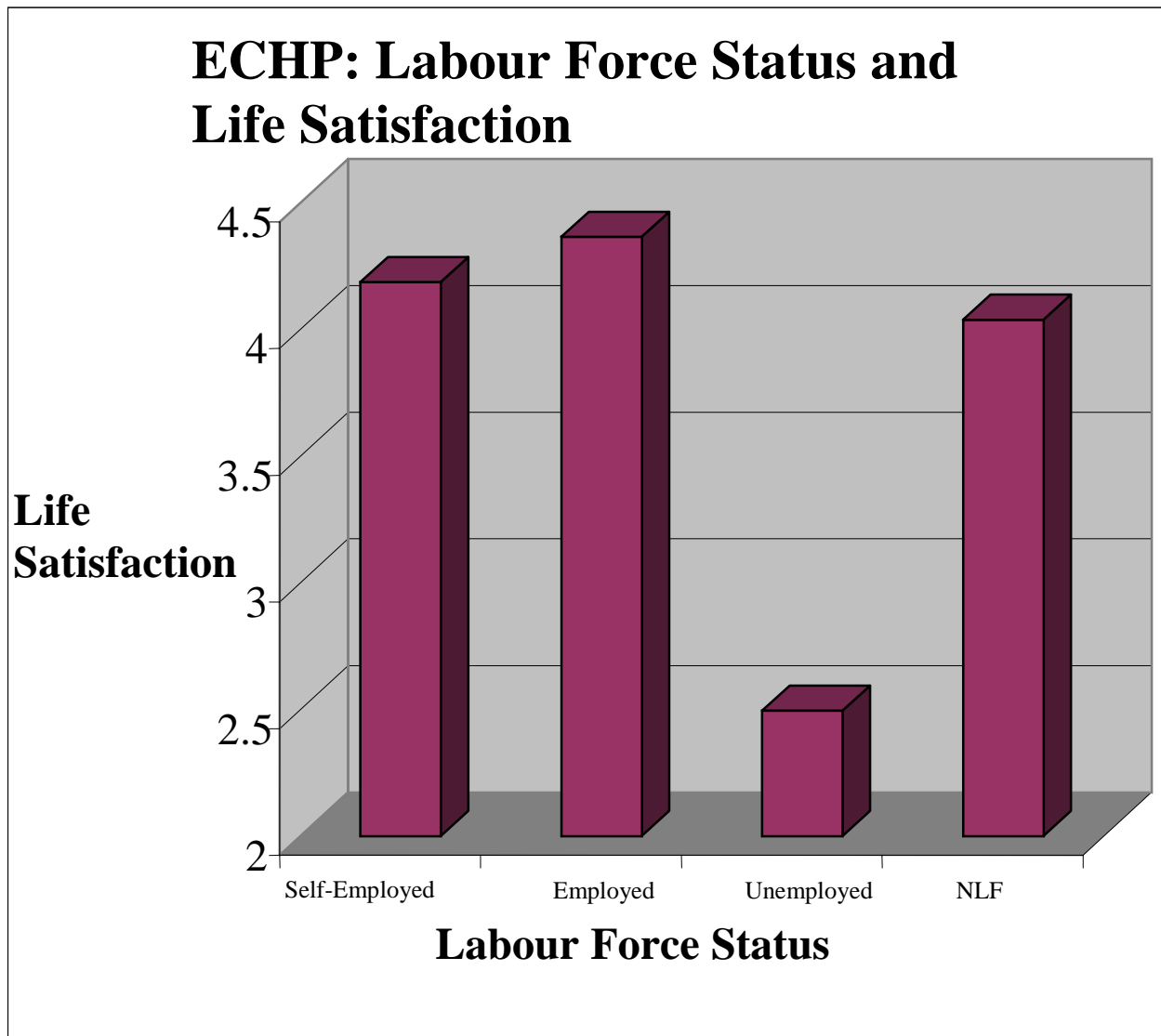
All of the job aspects matter for job satisfaction. Most of them are qualitative, so it is difficult to extract a ranking (can we trade off job insecurity for more interesting work)?

Self-employment is gently falling, but it is still true that three or more times as many people say they would prefer self-employment than are actually self-employed.

The job satisfaction “premium” from self-employment seems to be rising.

Do the above two imply that barriers to self-employment have been growing?

Figure 1. Life Satisfaction and Labour Force Status.



Source: ECHP. Life Satisfaction measured on a one to six scale.

Figure 2. The Well-Being Gap between those in Work and the Unemployed (GHQ_E-GHQ_U) and Regional Unemployment Rates. BHPS Waves One to Seven. (Eleven Regions)

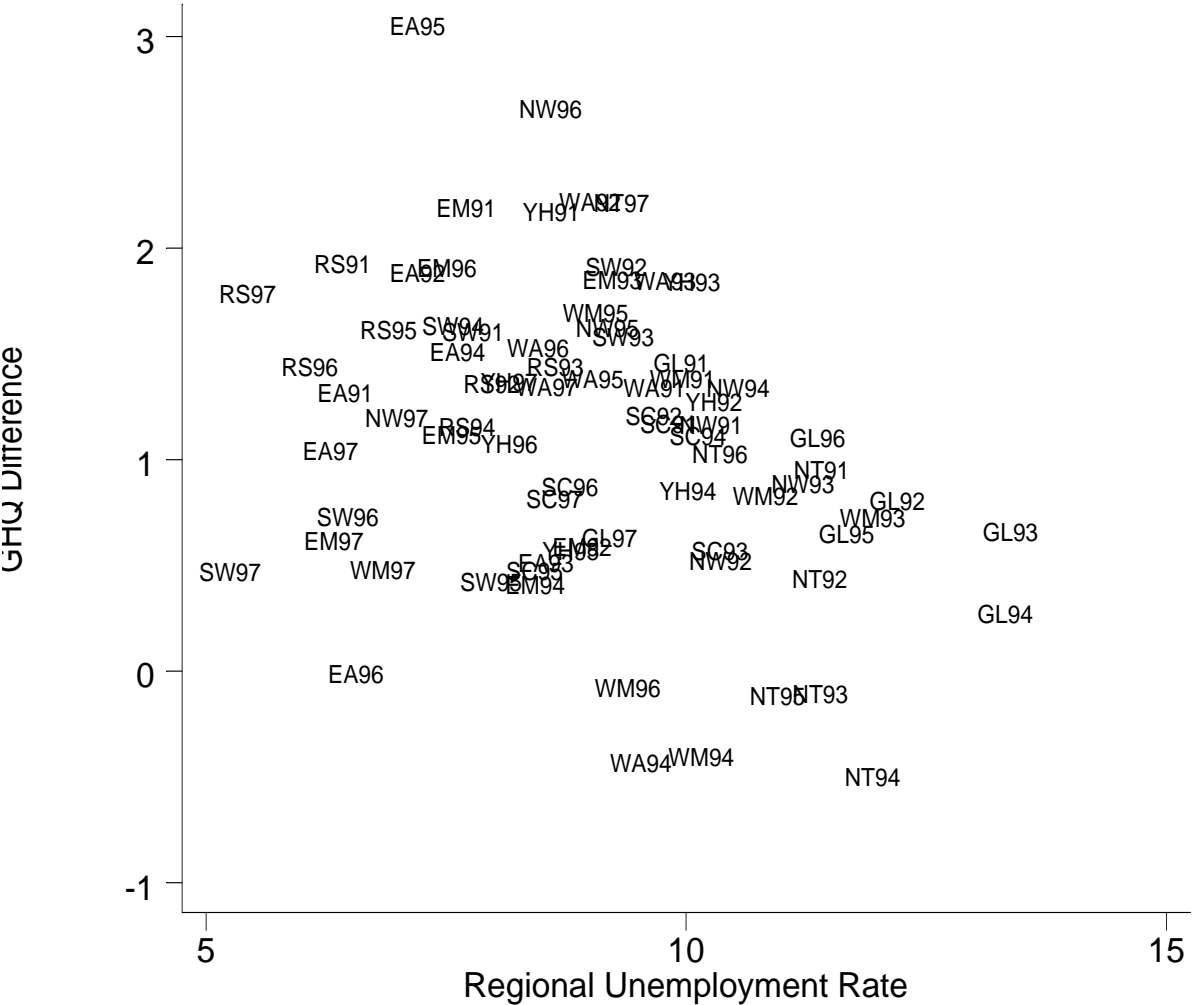
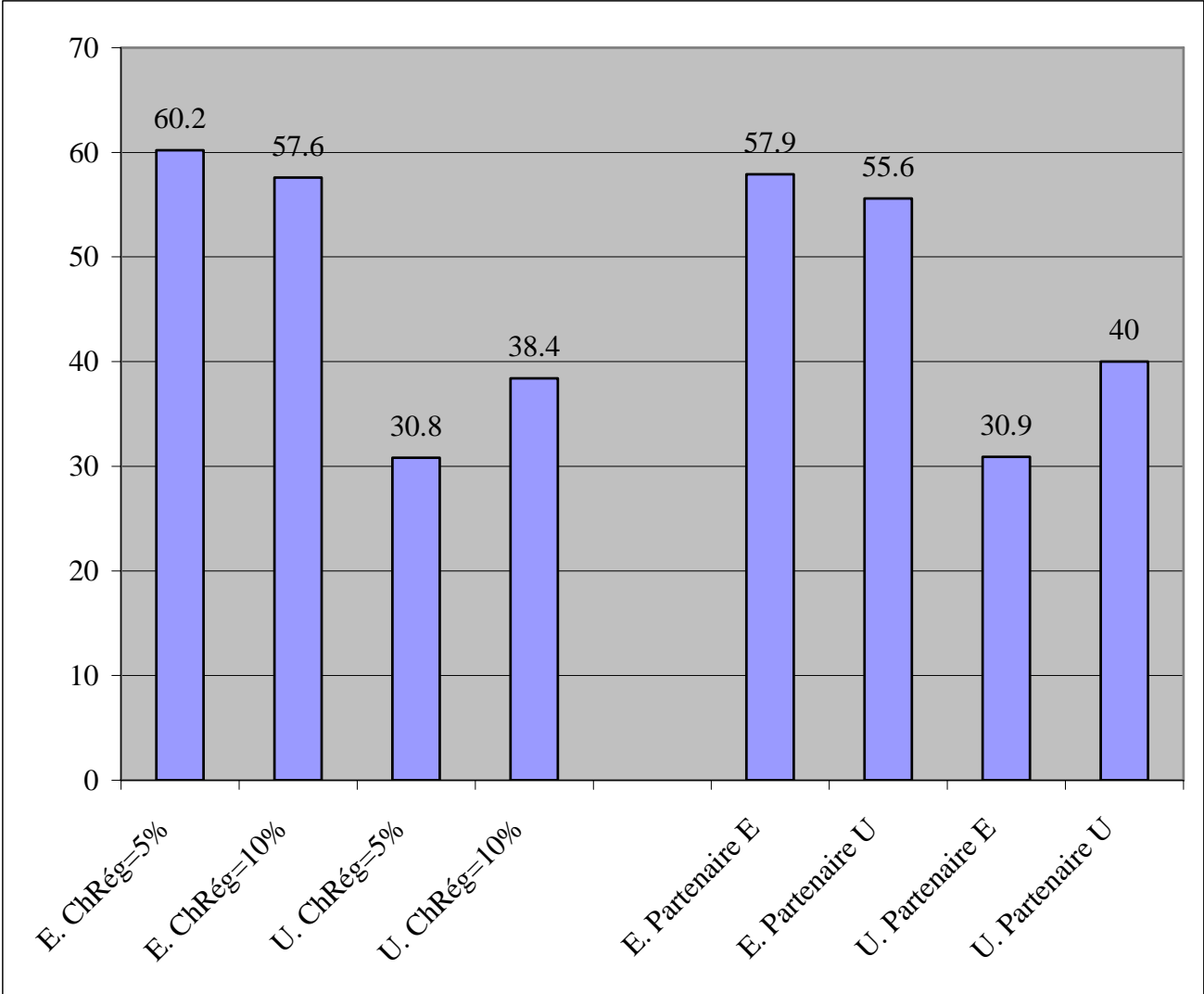


Figure 3. Well-Being and a) Regional Unemployment, and b) Partner's Unemployment.



Source: The calculations are from the regression results in Clark (2003).

Table 1. Number of employees interviewed in OECD countries:
ISSP Module on Work Orientations. 1989, 1997 and 2005.

	1989	1997	2005
West Germany	622	648	531
Great Britain	675	545	469
USA	838	1061	1243
Hungary	641	626	437
Netherlands	1553	1018	
Italy	586	475	
Norway	1305	1366	846
Sweden		793	866
Czech Republic		526	667
Poland		564	
New Zealand		695	812
Canada		546	520
Japan		607	428
Spain		387	556
France		1218	1084
Portugal		843	1012
Denmark		1065	1092
Switzerland		2547	
Total	6220	15530	10563

Table 2. Job Values.

ISSP 1989, 1997 and 2005

Job Values: Percentage Saying "Very Important"

WOMEN

	1989	1997	2005	1997	2005
<i>High Income</i>	20.5	20.0	21.5	24.1	24.8
Flexible Working Hours	19.5	18.4	17.5	19.1	* 20.8
Good Opportunities for	23.0	* 19.9	21.5	20.9	* 23.0
Job Security	61.4	63.5	62.4	60.3	* 58.4
Interesting Job	48.2	49.5	50.0	50.3	* 54.5
Allows to Work Independently	28.7	31.5	29.8	30.7	31.7
Allows to Help Other People	22.7	* 25.5	** 29.9	28.2	** 30.8
Useful to Society	25.4	24.3	** 31.6	26.0	** 30.0

MEN

	1989	1997	2005	1997	2005
<i>High Income</i>	24.4	22.5	* 25.3	26.3	27.7
Flexible Working Hours	14.1	13.5	** 17.6	16.5	** 19.5
Good Opportunities for	22.4	** 18.8	** 24.4	21.0	** 23.9
Job Security	57.1	59.6	60.7	56.7	** 53.3
Interesting Job	45.6	47.1	48.5	47.8	* 49.9
Allows to Work Independently	31.6	30.9	** 35.0	30.7	** 33.1
Allows to Help Other People	15.4	15.3	** 24.7	19.1	** 22.9
Useful to Society	22.1	* 16.8	** 25.7	21.7	** 24.1

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

Table 3. Job Outcomes.

ISSP 1989, 1997 and 2005

Job Outcomes: Percentage Reporting the Characteristic in Question

WOMEN

	1989		1997		2005	1997		2005
<i>Income is high</i>	15.3		15.4		16.3	16.0	**	18.4
Prefer to spend less time job	35.4	**	42.6	**	36.2	39.7	*	41.8
Prefer to spend more time job	13.7	**	9.3	**	12.0	10.2		10.1
Promotion Opportunities	18.2		17.4	**	22.9	17.7	**	22.0
Job is secure	72.7	**	65.4	**	69.5	62.2	**	65.9
Hard work	37.5	*	41.7		40.5	41.0		41.3
Good job content	42.3		45.2	**	49.8	42.5	*	45.1
Good relations at work	68.4		67.9		69	63.7		65.1
High job satisfaction	39.5		37.4	**	46.1	38.0	**	40.8

MEN

	1989		1997		2005	1997		2005
<i>Income is high</i>	25.8	*	22.8	**	26.7	23.8	**	28.5
Prefer to spend less time job	37.4	**	41.7	**	36.1	38.9		40.5
Prefer to spend more time job	12.2		10.4	**	12.1	10.0	*	8.9
Promotion Opportunities	23.0	**	19.4	**	26.0	20.9	**	26.2
Job is secure	70.1	**	61.9		63.0	60.4	**	63.0
Hard work	54.2		52.6		55.0	52.9		52.2
Good job content	41.6		40.4	*	44.5	40.2		40.1
Good relations at work	67.3		65.0	**	70.4	62.6	**	65.6
High job satisfaction	38.2		35.3	**	45.1	36.7	**	42.1

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 and 2005.

	1989-2005		1997-2005	
	Standard	With income and hours	Standard	With income and hours
2005	0.062* (0.026)	0.034 (0.030)	0.059** (0.015)	0.001 (0.017)
1997	-0.101** (0.025)	-0.078** (0.028)		
Male	-0.072** (0.020)	-0.142** (0.024)	-0.022 (0.015)	-0.081** (0.018)
30 to 44	0.034 (0.028)	-0.015 (0.031)	0.030 (0.021)	-0.020 (0.024)
45 to 65	0.124** (0.029)	0.056 (0.032)	0.113** (0.022)	0.039 (0.025)
Married	0.085** (0.022)	0.086** (0.024)	0.112** (0.016)	0.109** (0.018)
Years of Education	0.002 (0.004)	-0.008* (0.004)	0.008** (0.002)	-0.004 (0.003)
Earnings (\$000) per		0.083** (0.011)		0.118** (0.009)
Hours per week		0.000 (0.001)		-0.000 (0.001)
West Germany	0.039 (0.032)	0.047 (0.035)	-0.141** (0.040)	-0.322** (0.044)
Great Britain	-0.070* (0.032)	-0.052 (0.034)	-0.263** (0.041)	-0.410** (0.045)
USA	0.110** (0.027)	0.101** (0.029)	-0.088** (0.033)	-0.245** (0.038)
Hungary	-0.356** (0.032)	-0.232** (0.046)	-0.481** (0.040)	-0.549** (0.050)
Norway			-0.215** (0.033)	-0.383** (0.038)
Sweden			-0.269** (0.036)	-0.391** (0.040)
Czech Republic			-0.364** (0.039)	-0.460** (0.048)

New Zealand			-0.252** (0.037)	-0.413** (0.049)
Canada			-0.267** (0.042)	-0.444** (0.046)
Japan			-0.604** (0.041)	-0.713** (0.047)
Spain			-0.132** (0.043)	-0.211** (0.053)
France			-0.447** (0.033)	-0.528** (0.040)
Portugal			-0.186** (0.036)	-0.297** (0.043)
Observations	11063	9330	20195	16358
Log-Likelihood	-15955.75	-13463.41	-29820.64	-23975.37
Log-Likelihood at zero	-16126.60	-13603.53	-30108.91	-24336.40

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

Table 5a. Estimated Changes over Time in Various Job Outcome Measures.

ISSP 1989-2005.

Estimated Coefficients on “1997” and “2005”			
	1989-2005		1997-2005
	2005	1997	2005
Job satisfaction	0.062*	-0.101**	0.059**
	(0.026)	(0.025)	(0.015)
Income is High	-0.120**	-0.137**	0.071**
	(0.026)	(0.025)	(0.015)
Hours Preferences	0.077**	-0.093**	-0.069**
	(0.026)	(0.025)	(0.015)
Opportunities for advancement are high	0.053*	-0.079**	0.084**
	(0.026)	(0.025)	(0.015)
Job is secure	-0.206**	-0.249**	0.034*
	(0.027)	(0.025)	(0.015)
Hard work	0.149**	0.118**	0.038*
	(0.027)	(0.027)	(0.016)
Good job content	0.038	-0.040	-0.032*
	(0.028)	(0.026)	(0.016)
Good relations at work	0.065*	0.000	0.049**
	(0.032)	(0.030)	(0.018)

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 5b. Estimated Changes over Time in Various Job Outcome Measures.
 ISSP 1989-2005. Controlling for Earnings and Hours of Work

Estimated Coefficients on “1997” and “2005”			
	1989-2005		1997-2005
	2005	1997	2005
Job satisfaction	0.034 (0.030)	-0.078** (0.028)	0.001 (0.017)
Income is High	-0.167** (0.030)	-0.037 (0.029)	-0.060** (0.018)
Hours Preferences	0.055 (0.030)	-0.116** (0.029)	0.035 (0.018)
Opportunities for advancement are high	0.047 (0.030)	-0.033 (0.029)	0.040* (0.018)
Job is secure	-0.187** (0.030)	-0.189** (0.029)	-0.030 (0.018)
Hard work	0.173** (0.030)	0.076* (0.031)	0.095** (0.018)
Good job content	0.075* (0.031)	0.020 (0.030)	-0.040* (0.018)
Good relations at work	0.100** (0.036)	0.083* (0.035)	0.009 (0.021)

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. Change in Overall Job Satisfaction by Country. ISSP 1989-1997-2005.

Country	1989-1997	1989-2005	1997-2005
West	-	+ (10%)	+
Germany			
Great Britain	- (10%)	0	+
USA	-	0	+
Hungary	0	+	+
Norway	-	0	0
Sweden			0
Czech			0
Republic			
New Zealand			0
Canada			+ (10%)
Japan			0
Spain			-
France			0
Denmark			0
Portugal			0

Table 7. Overall Job Satisfaction and Job Quality Components
(ISSP 1989, 1997 and 2005)

	1989-2005	1997-2005
High Income	0.180** (0.013)	0.152** (0.009)
Want to Spend Less Time In Job	-0.314** (0.025)	-0.275** (0.018)
Want to Spend More Time In Job	-0.045 (0.039)	-0.072* (0.030)
Good Promotion Opportunities	0.175** (0.013)	0.155** (0.009)
Job Secure	0.113** (0.012)	0.082** (0.008)
Hard Work	-0.092** (0.012)	-0.103** (0.008)
Good Job Content	0.282** (0.011)	0.279** (0.008)
Good Relations at Work	0.510** (0.019)	0.478** (0.013)
N	8828	16941
Log Likelihood	-10973.11	-21877.54
Log Likelihood at zero	-12744.63	-25122.45
Pseudo-R ²	0.099	0.104

Table 8. Self-Employment in the ISSP 1989-1997-2005.

	Percentage of Working who are Self-Employed			Percentage of Working who Prefer Self-Employment to Employment		
	1989	1997	2005	1989	1997	2005
West Germany	11.0%	10.2%	10.4%	51.4%	61.7%	44.3%
Great Britain	11.7%	15.2%	12.9%	49.6%	46.2%	48.7%
USA	12.1%	11.6%	13.8%	63.5%	68.8%	61.2%
Hungary	5.9%	14.5%	9.0%	42.2%	58.8%	39.1%
Norway	5.1%	9.8%	10.9%	26.6%	27.5%	28.4%
Sweden		10.7%	10.3%		38.0%	31.8%
Czech Republic		10.6%	14.9%		42.8%	30.7%
New Zealand		9.2%	15.1%		63.4%	55.0%
Canada		15.2%	8.6%		58.7%	55.6%
Japan		16.8%	11.4%		42.7%	33.4%
Spain		3.4%	14.3%		42.9%	33.9%
France		9.2%	8.4%		51.1%	40.6%
Portugal		23.6%	14.1%		76.3%	51.8%
Denmark		8.1%	8.5%		39.9%	28.4%

Table 9. Self-Employment and Overall Job Satisfaction. ISSP 1989-1997-2005.

	1989-2005	1989-2005	1997-2005	1997-2005
Self-Employment	0.323**	0.381**	0.336**	0.288**
	(0.033)	(0.062)	(0.024)	(0.033)
Self-Employment*1997		-0.068		
		(0.081)		
Self-Employment*2005		-0.094		0.100*
		(0.083)		(0.047)

* = Significantly different from zero at the five per cent level; ** = Significantly different from zero at the one per cent level;

Appendix. ISSP Variable Definitions

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/cpi.ai.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).

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 items. It measures the correlation between the scale and the underlying factor. The alphas 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.

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