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Well-being Consequences of Unemployment in Europe*

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Abstract
Among the working age population, one of the most damaging individual experience is found to be unemployment. Many previous studies have confirmed devastating effects of unemployment on individual well-being, both pecuniary and non-pecuniary. Using the data from the European Community Household Panel survey we examine the factors which affect unemployed workers' well-being with respect to their situations in activity, income, housing, leisure time and health in Europe. Unemployment incidence reduces substantially the satisfaction levels with main activity and finance, while it increases substantially the satisfaction level with leisure time. With respect to health, it has a small negative effect. Unemployment duration also has a small negative effect on individual well-being, suggesting that unemployment has lasting and aggravating effect over the spells, contradicting the theory of adaptation. Three other results are worth mentioning. First, there are large cross-country differences in the well-being consequences of unemployment. Much smaller effects of unemployment are observed in Denmark and the Netherlands than in other countries. A part of this difference seems to be due to the differences in functioning and regulations in the labor market. In Denmark and the Netherlands, unemployment rate is lower, whose spells are shorter, and unemployment protection (unemployment benefits and active labor market policies) is greater. Second, with respect to methodology, there are small differences between cross-section and panel estimates, suggesting small bias due to unobserved fixed effects in cross-section estimation. Finally, among the unemployed, non-pecuniary factors, such as job prospect, health, and social relation, show significant effects on individual well-being, along with household income.

Key words: Satisfaction, health, unemployment.

Resumen
Entre la población en edad de trabajar, una de las experiencias individuales más dañinas es encontrarse desempleado. Estudios anteriores han confirmado efectos devastadores del desempleo sobre el bienestar individual, tanto pecuniarios como no pecuniarios. Usando los datos del Panel de Hogares de la Unión Europea, examinamos los factores que afectan al bienestar de los desempleados en Europa en relación a su actividad principal, su situación económica, las condiciones de su vivienda, su tiempo de ocio y su salud en Europa. La incidencia del desempleo disminuye sustancialmente los niveles de satisfacción con la actividad y la situación económica, mientras que aumenta el nivel de satisfacción con el tiempo de ocio. Con respecto a la salud, su efecto es negativo pero reducido. La duración del desempleo afecta también negativamente al bienestar individual, lo que sugiere un efecto duradero que se agrava con el tiempo de permanencia en dicha situación, contradiciendo la teoría de la adaptación. Cabe destacar tres resultados adicionales. En primer lugar, se constatan diferencias importantes entre países en cuanto a las consecuencias del paro sobre el bienestar individual. Las repercusiones del desempleo son menores en Dinamarca y los Países Bajos que en los restantes países de la UE. Una parte de esta discrepancia parece ser debida a las diferencias en cuanto al funcionamiento y regulación del mercado de trabajo. En Dinamarca y los Países Bajos, la tasa de desempleo es menor, el tiempo de permanencia en el desempleo es más corto y la protección social (los subsidios de desempleo y políticas de mercado de trabajo activas) es mayor. En segundo lugar, con respecto a la metodología, hay pequeñas diferencias entre las estimaciones transversales y las de panel, lo que sugiere que el sesgo provocado por la heterogeneidad inobservada en las estimaciones de sección cruzada es reducido. Finalmente, entre los parados, los factores no pecuniarios, tales como las perspectivas de trabajo, el estado de salud y las relaciones sociales, muestran efectos significativos sobre el bienestar individual, junto con la renta del hogar.

1. Introduction

Individual well-being (or happiness) depends on many things, ranging from income, labor market status, job characteristics, health, leisure, family, social relationships, to security, liberty, moral values and many others. Among the working age population, one of the most damaging individual experience is found to be unemployment. Many previous studies have confirmed devastating effects of unemployment on individual well-being. Economists emphasized income and consumption consequences (Browning and Crossley 1998; Bentolila and Ichino 2002), while other research papers emphasized physical, mental and emotional damages of unemployment (for example, Argyle 1999; Darity and Goldsmith 1996; Clark and Oswald 1994 and 2002; Frey and Stutzer 2002).

There are much fewer studies which examine the factors which affect the extent of well-being loss among the unemployed. Obviously, the extent that unemployment cause unhappiness depends on individual, social and institutional circumstances. While unemployed workers usually suffer income reduction, its extent would vary depending on other income sources, savings, income-generating asset holdings, unemployment insurance and private transfers. Non-pecuniary damage such as loss of identity and self-esteem, stress and depression also depends on the individual, family and social circumstances facing unemployed workers. On the other hand, unemployed workers gain time for non-market activities such as leisure, training, physical exercise and home-making activities (Ahn et al. 2004). Therefore, in evaluating the effect of unemployment on individual well-being, we should consider all these relevant factors.

Most studies on the effect of unemployment on subjective well-being, mainly due to the data availability, have used overall life satisfaction or happiness as dependent variable. In this study, we examine the effect of unemployment on the satisfaction in five domains of life; work or main activity, financial situation, housing situation, leisure time and health, using the European Community Household Panel survey (hereafter ECHP). These five domains are without a doubt among the most important aspects of life which determine the quality of life and ultimately human well-being.

Some of the questions that we will try to respond are: How large are the differences across country in the effect of unemployment on individual well-being? What factors are behind these differences? What individual and family factors affect the satisfaction levels of unemployed workers and in which domains of life? For example, do unemployment benefits or other sources of income reduce the fall in satisfaction among the unemployed? How does the local economic variable affect the satisfaction level of the unemployed? That is,

does the unemployed in a high unemployment region feel equally dissatisfied as those in a low unemployment region? How does the satisfaction level change as unemployment duration gets longer?

2. Conceptual Background and Literature

Satisfaction Consequence of Unemployment

Immediate consequences of unemployment are (usually) a reduced income and an increased amount of non-market time such as leisure. Consequently, the satisfaction level with respect to income will decrease and that with respect to leisure time will increase. With respect to the satisfaction level with main activity, unemployment would have a negative psychological effect due to the loss of identity and self-esteem and increased stress and anxiety due to family and social pressure and increased future uncertainty with respect to labor market status.

The satisfaction level with financial situation of unemployed workers will depend positively on other income source, such as income-yielding assets, savings and unemployment benefits. It will depend negatively on the opportunity costs in terms of foregone earnings. The higher the alternative income and the lower the opportunity costs, the smaller will be the drop in financial satisfaction.

Psychological effect of unemployment will be lower if future job prospect is better or if one has greater moral support from the family and society. Those who have a working spouse are likely to feel less pressure, therefore enjoy greater satisfaction in main activity, income and leisure. Family and social relation also alleviate the stress and anxiety of job loss. For many, work provides important sources of social relationship. Therefore, satisfaction and health consequences of unemployment also depends on family and social circumstances facing unemployed individuals. There is some evidence that family and social support promotes satisfaction and physical health, while social isolation is detrimental (Berkman and Glass 2000).

The duration unemployed is one important variable which affects the satisfaction level among the unemployed. How does the satisfaction level change as one remains unemployed longer? The theory of adaptation and habituation, proposed mostly by psychologists, suggests a recuperation of satisfaction over unemployment spells as one adapts to the situation (Diener and Lucas 1999). Easterlin (2003) distinguishes some life events such as income changes in which adaptation operates and others such as marriage, divorce and health where there is little or no adaptation. Lack of adaptation or habituation is

also found with respect to unemployment in some studies which use panel data (Winkelmann and Winkelmann 1998; Clark and Oswald 2002; Clark et al. 2003).

Health Consequence of Unemployment

The impact of unemployment on individual health has been an important issue among the researchers in many different areas. Many studies have shown significant harmful effects of unemployment on both morbidity and mortality (see a survey by Mathers and Schofield 1998) and psychological health (Clark and Oswald 2002). Recently, however, some studies have challenged the conventional findings. For instance, using an extensive Danish longitudinal data, Browning et al. (2003) find no significant effects of unemployment (job displacement) on stress-related health outcomes. This finding is important in the literature because they use a large representative Danish sample with detailed longitudinal information on individuals' socio-demographic and economic situations. However, there is a possibility that the Danish results are not applicable for other countries. Similarly, Ruhm (2003) and Ruhm and Black (2002) claim that health status is counter-cyclical since unemployment improves physical health through the reduction of smoking and drinking, lower calorie intake, fewer traffic accidents, and the rise of leisure time devoted to physical exercise.

Endogeneity Bias

People choose or do things in order to be happier. Therefore, all the variables which can be chosen to some extent by individuals suffer the problem of endogeneity bias. Those who value money relatively more tend to do things to be richer than those who do not. Those who enjoy working are more likely to be employed than those who do not. Those who enjoy more in a stable partnership are more likely to be married than those who do not. Those who enjoy more from health will try to be healthier than those who do not. Those who enjoy more from education are more likely to have higher education levels than those who do not. Those who enjoy more from a stable residence are more likely to be owner-occupier of their homes than those who do not. Therefore, all those variables are endogenous in the happiness or satisfaction regression. Only those variables which cannot be chosen by individuals, such as gender and age, involuntary unemployment, and education by some extent, are exogenous. The estimated coefficients of the endogeneous variables by a standard regression are likely to be underestimated. The magnitude of bias will depend on the degree that individuals can choose these things or actions in order to be happier. A typical remedy is to use instrumental variables which are sufficiently correlated with the endogenous independent variables but not with dependent variables. In

our case, we cannot carry out this method since we have no variables which satisfy this criterion. In interpreting the results of following analyses, one has to take into account of the possibility of this bias.

3. Data

The data we use come from the European Community Household Panel, which was conducted annually from 1994 until 2001 across many western European countries. It started with 12 then member countries and was joined by Austria in 1995 and by Finland in 1996. Sampling and survey questions are carefully prepared to insure maximum comparability across countries.[1] A further advantage of the ECHP is that surveyed countries share more or less similar culture and development levels as well as geographical proximity.

At the outset, it is important that one understands well the survey questions we analyze. The respondents in the ECHP were asked "How satisfied are you with your present situation in (1) your work or main activity, (2) your financial situation, (3) your housing situation, and (4) the amount of leisure time you have?" with 6 possible response categories ranging from 'very dissatisfied'(=1) to 'fully satisfied' (=6). With respect to health, the question is "How is your health status in general?" with 5 possible response categories ranging from 'very bad' to 'very good'.

The satisfaction and health questions are based entirely on individuals' own perception. The question asked is not concrete in terms of comparison groups nor in the description of each category of satisfaction levels or health status[2], therefore leaving large rooms for interpretation by interviewees. Second, the possible responses are ordered qualitatively.[3] Comparing the responses between groups of people is not straightforward. We begin with simple "averages" of the responses in the questionnaire. The simple average provides a satisfaction or health index (the bigger the average, the happier or healthier) which is comparable across the populations if we are willing to assume the linearity across response.

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[1] See Peracchi (2002) for a general description of the survey and some discussion on the problems of attrition, non-response and weighting procedures in the survey.

[2] For the satisfaction questions, the categories (2,3,4 and 5) between the worst ('very dissatisfied'=1) and the best ('fully satisfied'=6) have no words attached to them. It is also interesting to note that there is no single category exactly in the middle as there are 6 categories in total. People who consider their satisfaction level about the middle (there are usually many of them) have to choose between 3 and 4. In the health question, each category is attached with specific words, very bad, bad, fair, good, very good.

[3] To the extent that respondents consider the response numbers (1 to 6 or 1 to 5) as cardinal measure of their happiness (for example, the response 4 means two times happier (or healthier) than the response 2) the reported values may be used as the cardinal measure of satisfaction.

4. Well-being Differences between the Employed and the Unemployed

First, we examine the association between employment status on one hand and satisfaction or health status on the other hand using pooled cross-section samples of all waves (1994-2001) of the ECHP. In the following table, we compare the average levels of satisfaction and health status between the employed and the unemployed. We restricted the employed to the paid employees with more than 15 hours of work per week. Furthermore, in order not to confound possible correlated effect of schooling and semi-retirement unemployment, we restricted the sample to those in ages from 25 to 54. We also report average ages by employment status to see the possibility of age effect dominating the satisfaction or health differences by employment status.

Table 1: Average Satisfaction and Health between Employees and Unemployed Data: Pooled Cross-section of ECHP (1994-2001)

	Main Activity			Finance			Housing		
Country	Emp.	Un.	Diff.	Emp.	Un.	Diff.	Emp.	Un.	Diff.
Total	4,38	2,63	1,76	3,81	2,42	1,39	4,57	4,15	0,42
Austria	4,93	3,00	1,93	4,29	2,70	1,59	5,05	4,58	0,47
Belgium	4,49	3,03	1,46	4,16	2,94	1,22	4,72	4,48	0,24
Denmark	4,93	4,10	0,83	4,54	3,50	1,04	4,98	4,73	0,25
Finland	4,54	3,03	1,51	4,03	2,64	1,40	4,71	4,49	0,22
France	4,41	2,57	1,84	3,70	2,38	1,32	4,65	4,28	0,37
Germany	4,37	2,11	2,26	3,86	2,21	1,65	4,59	4,16	0,42
Greece	3,99	2,09	1,90	3,34	2,09	1,26	4,17	3,76	0,40
Ireland	4,57	2,71	1,86	3,84	2,00	1,84	4,85	4,12	0,73
Italy	4,03	1,92	2,11	3,45	1,88	1,57	4,24	3,62	0,63
Luxembourg	4,75	2,18	2,56	4,23	2,04	2,19	4,81	4,81	0,00
Netherlands	4,73	4,04	0,69	4,59	3,69	0,90	4,91	4,78	0,13
Portugal	4,00	1,85	2,14	3,11	1,96	1,15	3,93	3,57	0,36
Spain	4,23	2,38	1,85	3,44	2,08	1,35	4,41	4,11	0,31
UK	4,33	2,51	1,82	3,77	1,96	1,80	4,54	4,08	0,46
	Leisure Time			**Health**			**Average Age**		
Country	Emp.	Un.	Diff.	Emp.	Un.	Diff.	Emp.	Un.	Diff.
Total	3,86	4,36	-0,49	4,01	3,82	0,20	38,49	36,96	1,54
Austria	4,47	4,96	-0,49	4,27	3,66	0,61	37,82	39,08	-1,26
Belgium	3,88	4,62	-0,74	4,13	3,77	0,36	38,23	38,31	-0,07
Denmark	4,31	5,00	-0,68	4,42	4,09	0,33	39,45	37,37	2,08
Finland	4,12	4,95	-0,83	3,97	3,83	0,14	40,15	40,04	0,11
France	3,97	4,44	-0,47	3,81	3,68	0,13	39,06	36,72	2,34
Germany	3,89	4,59	-0,70	3,96	3,58	0,37	38,76	39,72	-0,96
Greece	3,39	4,34	-0,95	4,64	4,53	0,11	38,16	35,06	3,10
Ireland	4,22	4,26	-0,04	4,49	4,09	0,40	37,50	37,15	0,35
Italy	3,55	4,13	-0,58	3,88	3,93	-0,05	38,52	33,16	5,36
Luxembourg	4,32	4,99	-0,67	4,06	3,31	0,74	37,53	37,19	0,34
Netherlands	4,06	4,46	-0,40	4,06	3,64	0,42	38,12	39,42	-1,31
Portugal	3,57	3,90	-0,33	3,63	3,32	0,31	37,42	37,66	-0,23
Spain	3,40	4,11	-0,71	4,04	3,98	0,07	37,64	35,64	2,00
UK	3,80	4,33	-0,53	4,26	3,98	0,28	38,32	37,96	0,36

Note: The sample period is 1994-96 for Germany, Luxembourg and the UK, 1995-2001 for Austria and 1996-2001 for Finland.

The largest difference by employment status is shown in the satisfaction with main activity. Paid-employees enjoy 1.76 points higher satisfaction than the unemployed. This difference is indeed large if we consider the satisfaction scale ranges from 1 to 6. The difference is also large in the satisfaction with financial situation, 3.81 for employees vs. 2.42 for the unemployed. As expected, housing satisfaction does not vary so much by employment status as in activity or income satisfaction although employees again declare higher satisfaction than the unemployed. For leisure time satisfaction, the unemployed declare substantially higher satisfaction than the employees. With respect to health status, the difference is 0.2 in favor of the employees. Age difference between the employees and the unemployed, 1.54 years, is relatively small to explain the satisfaction or health differences between the two groups. In summary, there is quite a clear evidence that the unemployed suffer substantial satisfaction reductions in all aspects of life except for leisure time. Even in leisure time satisfaction, the difference might not be so favorable for the unemployed if we consider the quality of leisure since employees who are relatively richer than the unemployed would spend more money for each hour of leisure.

Although the sign of the difference by employment status is the same across country, its magnitude varies substantially. With respect to the satisfaction with main activity, the employee-unemployed difference is much smaller in Denmark and the Netherlands than in other countries mainly due to high satisfaction level declared by the unemployed in these two countries. The search for the explanation of this difference by country will be one of our objectives in this paper. With respect to the satisfaction with financial situation, Denmark and the Netherlands again stand out for their relatively small difference between employees and the unemployed. However, the cross-country differences are much smaller than in the previous case. With respect to the satisfaction with housing situation, there are much smaller differences between employees and the unemployed with the largest difference (0.73) found in Ireland.

With respect to the satisfaction with the amount of leisure time, the unemployed declare about 0.5 point higher satisfaction level in most countries except for Ireland where there is almost no difference. This lack of difference in Ireland should be examined further. The difference in health status between employees and the unemployed is negligible in Greece, Italy and Spain, while it is substantial in Austria and the Netherlands. A part of the lack of difference in the Mediterranean countries may be due to the age differences where the unemployed are substantially younger than employees. We will try to examine this using multivariate analysis later on.

Cross-section vs. Panel

As it is well documented, cross-sectional differences in satisfaction levels confound the effects of unobserved heterogeneity. The magnitude of this bias in cross-section estimates will depend on the extent that the included variables are correlated with uncontrolled variables which affect satisfaction. By examining the satisfaction levels of the same individuals before and after unemployment and along the unemployment spells, we control unobserved time-invariant individual heterogeneity.

Most previous studies which use longitudinal data have found substantial and lasting negative effects of unemployment on individual well-being: Clark and Oswald (2002) on psychological health in the UK, Clark et al. (2003) and Winkelmann and Winkelmann (1998) on life satisfaction in Germany, and Clark (2002) on life satisfaction in Europe.

First, we report the results of a simple bivariate analysis where we contrast the changes in satisfaction level to the changes in employment status. Over two consecutive years we compare four possible employment status, both years employed, transition from employment to unemployment, transition from unemployment to employment and unemployed both years[4]. While the transition from employment to unemployment will provide us the effect of unemployment incidence, unemployment in both years will provide us the effect of lengthening (by approximately one year) unemployment duration .

[4] The employment status in each year refers to the moment of survey. Therefore, we do not know any other transitions occurred during the period.

Table 2: Changes in Satisfaction by Employment Status Change Between Any Two Consecutive Years: ECHP 1994-2001

	Main Activity				Finance			
	E→E	E→U	U→E	U→U	E→E	E→U	U→E	U→U
Total	-0,024	-1,144	1,426	0,042	0,024	-0,608	0,845	0,022
Denmark	-0,049	-0,443	0,661	-0,002	-0,010	-0,584	0,679	0,031
Netherlands	-0,019	-0,682	0,756	0,037	0,026	-0,527	0,690	0,015
Belgium	-0,026	-1,030	1,810	0,122	0,000	-0,682	0,888	0,014
France	-0,037	-1,268	1,793	0,164	0,009	-0,529	0,860	0,073
Ireland	-0,022	-1,277	1,580	0,142	0,071	-0,755	1,135	0,069
Italy	-0,024	-1,221	1,427	0,024	0,011	-0,763	0,920	0,049
Greece	0,002	-1,084	1,166	-0,022	0,068	-0,595	0,725	-0,001
Spain	-0,024	-1,195	1,563	-0,038	0,033	-0,486	0,917	-0,021
Portugal	-0,003	-1,484	1,590	-0,025	0,018	-0,716	0,771	-0,046
Austria	-0,014	-1,375	1,800	0,030	0,005	-0,885	1,005	0,010
Finland	-0,042	-1,149	1,587	0,081	0,060	-0,583	1,027	0,048

	Housing				Leisure time			
	E→E	E→U	U→E	U→U	E→E	E→U	U→E	U→U
Total	0,007	-0,004	0,029	-0,005	-0,014	0,617	-0,614	-0,027
Denmark	-0,009	0,067	-0,071	-0,026	-0,020	0,694	-0,569	-0,063
Netherlands	0,008	0,081	-0,101	-0,029	-0,020	0,577	-0,318	0,015
Belgium	0,005	0,185	-0,048	-0,053	-0,008	0,714	-0,726	-0,070
France	0,015	0,011	0,029	0,028	0,008	0,475	-0,554	-0,051
Ireland	0,000	-0,090	-0,036	0,007	-0,003	0,130	-0,321	0,130
Italy	0,000	-0,094	0,136	0,017	-0,028	0,667	-0,687	-0,018
Greece	-0,009	-0,149	-0,018	-0,045	-0,034	0,700	-0,900	-0,099
Spain	0,023	0,030	0,025	0,008	0,014	0,816	-0,783	-0,043
Portugal	0,020	-0,041	0,143	-0,007	-0,010	0,205	-0,207	-0,018
Austria	0,007	-0,072	0,195	0,020	-0,019	0,791	-0,626	0,050
Finland	0,008	0,081	0,050	0,003	-0,032	0,652	-0,604	0,018

	Health				Number of Observations			
	E→E	E→U	U→E	U→U	E→E	E→U	U→E	U→U
Total	-0,027	-0,052	0,030	-0,031	179,968	5268	6304	13549
Denmark	-0,046	-0,033	-0,046	-0,121	12,051	331	415	423
Netherlands	-0,025	-0,157	0,071	-0,037	21,728	356	506	1583
Belgium	-0,023	0,015	0,012	-0,010	13,243	261	251	1177
France	-0,045	0,005	-0,084	-0,042	26,838	740	767	1834
Ireland	-0,019	-0,158	-0,011	-0,048	9,673	203	279	790
Italy	-0,008	-0,065	0,040	-0,012	24,992	588	823	2731
Greece	0,015	0,002	0,085	0,022	11,879	486	614	1084
Spain	-0,018	0,016	0,009	-0,034	18,834	1205	1440	2233
Portugal	-0,039	-0,130	-0,037	-0,057	18,804	509	522	727
Austria	-0,020	-0,122	0,174	0,027	11,101	263	195	299
Finland	-0,042	0,020	-0,070	-0,010	10,825	326	492	668

The results confirm the results of cross-sectional analysis. Incidence of unemployment reduces substantially the satisfaction with main activity and finance while they increase substantially the satisfaction level with leisure time. Reemployment, on the other hand, increases (decreases) the satisfaction levels with main activity and finance (leisure time) by a similar magnitude. With respect to the satisfaction with housing condition there is no change. With respect to health, unemployment incidences worsen slightly health status while reemployment improves it slightly.

Although general patterns are similar across country, there are large differences between countries in the magnitude of effect. As in the cross-section analysis, the negative (or positive) effects of unemployment incidence (or reemployment) on the satisfaction with main activity are much smaller in Denmark and the Netherlands than in other countries. In the satisfaction with leisure time, the effect of unemployment or reemployment is much smaller in Ireland and Portugal than in other countries.

The increase in unemployment duration by one year does not affect much satisfaction level or health status. This suggests that the effects of unemployment is persistent over the unemployment spells.

In Table 3, we compare the effect of unemployment between pooled cross-section data and panel data estimates including other control variables. The control variables include age, gender, marital status, health status, housing tenure, housing cost, household income, unemployment rate and country and time dummies[5].

Table 3: Cross-section vs. Panel Effect of Unemployment (re: employed)
Data: ECHP 1994-2001

Satisfaction with	Cross-section (N*T=438,302)	Panel (N=82,329;N*T=422,350)
Main Activity	-1.39 (193)	-1.14 (139)
Financial Situation	-0.76 (111)	-0.62 (76.5)
Housing Situation	-0.04 (6.79)	-0.01 (1.87)
Leisure Time	0.59 (73.6)	0.58 (61.5)
Health Status	-0.11 (24.5)	-0.03 (5.71)

Note: Also included are age, gender, education, marital status, health, social interaction, housing tenure, housing cost, unemployment rate, household income, and country and time dummies.

Controlling unobserved time-constant individual heterogeneity reduces slightly the effect in all life domains. The change is largest in health: The

[5] We run OLS regressions. One important disadvantage of OLS is its assumption of cardinality of the dependent variable. However, ordered probit results were very similar to those of OLS. For interpretation convenience we report OLS results.

substantial negative effect of unemployment in the cross-section estimation becomes almost negligible in the panel estimation, suggesting that less healthy people are more likely to become or stay unemployed than healthier people. However, the effect of unemployment is still large negative in the satisfaction with main activity and financial situation and large positive in the satisfaction with leisure time.

5. Determinants of Well-being Among The Unemployed

Now, given the clear evidence that unemployment reduces substantially the satisfaction levels with activity, finance, housing and health, and increases significantly the satisfaction level with leisure time, we examine individual and social factors which affect satisfaction levels *among the unemployed*.

As for the individual characteristics, we include age, gender, education and marital status. There is ample evidence of negative effect of age on health. With respect to the domain satisfaction, we have no theoretical hypothesis. If we consider the evidence that job satisfaction decreases until ages around 40 and increases thereafter (Blanchflower and Oswald 2004), we might expect the opposite in the case of the unemployed. With respect to gender, we expect unemployed men declaring higher dissatisfaction with activity and income than unemployed women due to a stronger market attachment and greater financial responsibility on average among them. Similar reasoning may apply to the married relative to singles although married person may feel less pressure when unemployed if the spouse is employed. In all studies of life and job satisfaction, health is found to be one of the most important determinants. We include health status as an additional explanatory variable in the regressions of satisfaction. Although there is a possibility of endogeneity in that those who are less satisfied in life domains are more likely to get ill and less healthy, we believe the causality from health to satisfaction to be much stronger than the other way around.

We can distinguish three types of the reason for being unemployed: quit, layoff and other reasons. Unfortunately, the proportion of quits in our sample is very low (less than 1%) since those who quit usually have no or very short spells of unemployment. We expect those who are laid off suffer more from unemployment. Unemployment benefit increases the satisfaction level among the unemployed as it fills temporal income drop from job loss. The magnitude of the effect will depend on the replacement rate and the duration of entitlement. Obviously, its effect should be felt most strongly in the financial satisfaction.

Expectation also plays an important role in determining unemployed workers' emotional satisfaction. For example, how unemployed workers feel

about their misfortune would depend on how are the job prospects in the future. Those who think it is easy to find another job would not feel so miserable as those who see little chance of receiving a decent job offer in the future. To this effect, the ECHP provides a question "How good or bad do you think are your chances of finding the kind of job you are looking for within the next 12 months?". Furthermore, there is a question asking if the respondent had received any offer during the last 4 weeks. We use this variable as another proxy for job offer prospects.

Social relation helps to ease the pain and stress from unemployment. The ECHP includes three variables regarding the intensity of social interaction with relatives, neighbors and friends. The first variable (Club) asks the respondents if they are affiliated with any sports or social club. The second (Chat) asks the frequency of conversation with neighbors and friends, and the third (See) asks the frequency of seeing relatives. We expect that all these three variables have positive effects on the satisfaction level, especially in the domains of main activity, leisure and health.

Household economic situation is included using two variables. The first is household monthly income adjusted according to OECD equivalent scale. The higher the income the higher the satisfaction level in general, and in particular with financial situation. The second variable captures the financial burden of housing costs either from rent or from mortgage payment. We include the ratio of the burden to household income. We expect the higher the ratio, the lower the satisfaction with financial and housing situation.

Local unemployment rate could affect the satisfaction level of the unemployed either positively since those living in higher unemployment regions may feel less stigma and pressure or negatively since higher local unemployment rates may represent worse future job prospects. Country dummy variables will capture country fixed effects net of included individual characteristics. On the other hand, year dummy variable will capture temporal macroeconomic effects common to all countries.

Results: Cross-section vs. Panel

In Table 4 below, we examine the factors which affect well-being of the unemployed. While cross-section estimation use the pooled cross-section sample of any periods unemployed, panel data estimation uses only those who are observed unemployed at multiple waves of survey, the main reason why the sample size reduces substantially in the panel estimation. While panel data estimation controls for fixed individual effect, the requirement that individuals have to be unemployed at least twice (at the moment of survey) restricts the

sample to those who are very prone to unemployment. Therefore, the panel data sample may be drastically different from the cross-section sample[6]. This difference has to be considered in interpreting the results. In panel data estimation we estimate the effects of changes in each variable on the changes in the satisfaction levels and health status while controlling for individual fixed effects. We do this by estimating well-being equations using the deviations from the mean as the dependent variable. Therefore, those variables who do not vary over time, such as gender, education and country of residence, are dropped from panel data estimation.

[6] The sample means for the two groups are shown in Appendix A.1. Those who are dropped in the panel estimation (those who are observed unemployed only once) are significantly different from those who are included in both. The former were younger, with more schooling, in better health, with better job prospect, with higher income and shorter unemployment duration than the latter.

Table 4: Determinants of Well-being *among the Unemployed*: Cross-section (N*T=12,019) vs. Panel Data (N=2854, N*T=7814)

	Main activity		Finance		Housing		Leisure		Health	
	C-S	Panel	C-S	Panel	C-S	Panel	C-S	Panel	C-S	Panel
Age	0.00	**0.06**	0.00	**0.06**	**0.01**	0.01	0.00	-0.03	**-0.02**	0.00
Men	**-0.47**		**-0.36**		**-0.08**		**0.14**		**0.04**	
Education (re: low)										
Middle	**-0.16**		-0.03		**0.07**		-0.05		**0.15**	
High	**-0.17**		-0.03		**0.08**		**-0.09**		**0.18**	
Marital Status (re: single)										
Married	**0.13**	-0.16	**0.37**	0.23	-0.03	-0.28	**-0.26**	**-0.46**	**0.04**	-0.10
Divorced	**-0.17**	**-0.62**	**-0.11**	-0.18	**-0.15**	-0.26	**-0.36**	0.30	-0.04	**-0.29**
Widowed	-0.20	-0.24	-0.05	-0.18	0.04	-0.63	-0.21	-0.17	-0.08	0.33
Health (re: very bad)										
Very good	**0.51**	0.12	**0.41**	-0.07	**0.53**	**0.33**	**1.08**	**0.48**		
Good	**0.36**	0.04	**0.31**	-0.14	**0.27**	0.18	**0.80**	0.31		
Fair	**0.27**	0.04	0.18	-0.14	0.10	0.03	**0.64**	0.16		
Bad	0.17	-0.12	0.05	**-0.32**	-0.02	-0.17	**0.61**	0.27		
UB yes	**0.07**	-0.01	**0.14**	**0.14**	0.04	0.05	0.04	0.07	-0.01	-0.04
Job prospect (re: very bad)										
Good	**0.52**	**0.30**	**0.44**	**0.37**	**0.15**	**0.12**	**0.11**	0.01	**0.19**	0.06
Fair	**0.31**	**0.20**	**0.33**	**0.21**	**0.15**	0.04	0.04	0.00	**0.12**	0.03
Bad	**0.12**	0.06	**0.17**	**0.11**	0.03	0.02	0.00	-0.06	**0.05**	0.00
Offer yes	**0.10**	**0.20**	-0.04	-0.01	-0.05	**-0.12**	**-0.10**	**-0.16**	-0.02	0.03
Social Interaction (re: no)										
Club yes	0.05	0.03	**0.06**	**0.09**	0.01	0.08	**0.13**	0.01	**0.06**	0.03
Chat yes	**0.10**	0.03	**0.15**	0.04	**0.18**	**0.16**	0.06	**0.15**	**0.08**	0.04
See yes	**0.09**	0.03	**0.07**	0.06	**0.09**	0.01	**0.19**	0.01	**0.12**	**0.14**
Housing Tenure (re: owner without mortgage)										
Own-mort.	**0.17**	0.00	0.10	0.11	**-0.18**	0.01	-0.01	-0.07	0.04	-0.07
Renter	**0.14**	0.02	-0.03	-0.05	**-0.99**	**-0.69**	**-0.18**	-0.17	-0.04	0.02
Others	-0.07	0.19	**-0.12**	-0.12	**-0.59**	**-0.35**	**-0.16**	-0.10	0.00	0.06
Layoff	**-0.12**	-0.02	**-0.06**	0.00	0.02	0.09	0.02	0.10	0.01	0.01
Housing cost	**-0.07**	0.01	**-0.06**	-0.05	**0.13**	0.07	-0.01	0.01	-0.01	0.01
HH income	**0.13**	**0.17**	**0.44**	**0.29**	**0.37**	0.05	**0.20**	0.09	**0.08**	0.01
Un. Duration	**-0.05**	**-0.04**	**-0.04**	**-0.05**	0.01	-0.01	0.00	-0.01	0.00	-0.01
Unemp. Rate	0.11	0.27	**0.21**	**0.30**	-0.08	-0.18	**-0.34**	**-0.44**	**0.25**	0.16
R-squared	0.19	0.02	0.26	0.05	0.19	0.03	0.10	0.01	0.18	0.01

Note: Those in bold face are significant at 5%. Housing cost, household income, unemployment rate and unemployment duration in months are all in logarithm. Also included in the regressions are age, gender, education, marital status, housing tenure, country dummies and time dummies.

In general, explanatory power of the regressions (R-squared) and the precision of estimates are much smaller in panel data estimation than in cross-section regressions. While the signs are in general same between different estimations, the magnitudes and statistical significance vary considerably for some variables.

Age and Gender: Age in general has small or no effect on the satisfaction in all domains in the cross-section, but in the panel estimation it has significant

positive effects on the satisfaction with main activity and finance and a negative effect on health. By gender, men declare substantially lower satisfaction with respect to main activity and finance supporting the hypothesis of stronger labor market attachment, higher opportunity costs, and greater financial responsibility among men. On the other hand, men enjoy higher satisfaction in leisure time and health than women, which suggests that unemployed women dedicate more time on other than leisure than unemployed men as found in Ahn et al. (2004).

Education: Unemployed workers with higher education declare lower satisfaction with respect to main activity and leisure but declare better health than those with lower education. Better health among higher educated is consistent with previous findings (Ahn 2002). Lower satisfaction with respect to leisure and main activity among the higher educated may reflect higher opportunity costs and greater stigma of unemployment among them.

Marital Status: Married unemployed workers declare substantially higher satisfaction with respect to main activity and finance than singles suggesting greater other income sources among the married. Marriage seems to serve as income protection among the unemployed. Lower satisfaction with respect to leisure declared by married unemployed worker suggests greater home-making activities among them than singles.

Health: Health stands out as one of the most important factors in determining satisfaction levels in all four domains in the cross-section estimation. In the panel estimation, the effect, although the signs are maintained, are substantially reduced. Without a doubt, healthier persons are much more satisfied in all domains of life. Its effect is largest in the satisfaction with leisure. Those in very good health enjoy about 0.5 points higher levels of satisfaction with leisure time than those in very bad health.

Unemployment Benefits: This variable is included in dichotomous category, whether receive any unemployment benefits or not, due to data availability. The receivers declare higher satisfaction levels with financial situation than those who do not receive them, but the effect is modest. On other domains there are no effects.

Job Prospects: Labor market expectation is important. Those who consider good job prospect declare about 0.3-0.5 points higher satisfaction level with respect to main activity and financial situation than those with a view of very bad job prospect. Better job prospects are also associated with higher levels of satisfaction in all other domains, although significant only in the cross-section estimation. On the other hand, past offers affect positively on the satisfaction with main activity but negatively on the satisfaction with leisure time.

Social Relation: As hypothesized earlier, those who are affiliated with some sports or social club, those who has higher frequency of conversing or seeing neighbor, friends or relatives declare higher satisfaction and better health. However, in these variables there are some possibilities of reverse causation. That is, those who have a joyful and optimistic nature are likely to relate more with others. Similarly with respect to health. In case of the positive effect of club affiliation on the satisfaction level with financial situation, a reverse causation is likely in that those who has a greater purchasing power are more likely to be able to afford club membership.

Housing: As expected, housing tenure affect mostly the satisfaction with respect to housing situation. Those who are owners without any mortgage pending are most satisfied and renters are least satisfied with their housing situation. Financial burden of housing costs reduces somewhat the satisfaction level with finance but increases the satisfaction with housing condition. This might be suggesting that higher burden means better quality house as household income is included in the regression.

Quits vs. Layoffs: It is likely that those who quit (usually to find better jobs) find jobs faster and suffer less during the spells of unemployment. As our sample includes only those who are unemployed at the time of survey (stock sample), we have very few (less than 1%) unemployed workers who quitted to find a better one. Therefore, in our sample most of the quitters are those who quit their previous job for family reasons. We find that those who are laid off are worse-off with respect to the satisfaction with main activity, but only in the cross-section estimation.

Household Income: Higher household income increases satisfaction levels in all domains of life. As expected the effect is largest in the domains of finance and housing. The panel effect is larger than the cross-section effect in the domain of main activity but smaller in other domains. For example, a 100% increase in income raises financial satisfaction by 0.29-0.44 points, and by about 0.15 the satisfaction with main activity.

Unemployment Duration

Lengthening unemployment affects satisfaction level negatively in the domains of main activity and financial situation in both estimations. For example, doubling unemployment duration reduces the satisfaction level in both domains only by about 0.05 points. However, this effect might be underestimated due to a selection bias in that those who would suffer more from lengthening unemployment are likely to exit faster (Stewart 2001). The negative

effect contradicts the theory of adaptation, but is consistent with the hypothesis that lengthening unemployment aggravates financial and mental deprivations.

Local Unemployment Rate: Country and year specific unemployment rate has no significant effect on the satisfaction with respect to main activity and housing, while it has a significant positive effect on the satisfaction with finance and health, but a significant negative effect on the satisfaction with leisure time. The lack of effect on main activity does not support either the hypothesis that the unemployed living in higher unemployment regions feel less pressure nor the hypothesis that higher unemployment represents worse future job prospects, therefore lower satisfaction. The substantial negative (positive) effect on the satisfaction with leisure time (finance and health) is not readily explicable and remains to be explored further. Finally, in interpreting the results one has to consider that there is some correlation between local unemployment rate and job prospect in that lower unemployment rates mean better job prospect. Interpreting the effect of job prospect and that of unemployment rate together, we can say that the better local labor market situation, the more satisfied (or less desperate) are the unemployed.

6. Cross-country Differences in the Effect of Unemployment

In our regressions, despite controlling for variables related to the hardships of unemployment and individual's perceptions about future prospects, there are significant cross-country differences regarding the impact of unemployment on individual satisfaction. Conceivably, these differences reflect individual perceptions based on the aggregate state of the labor market and, in particular, on the labor market institutions designed to protect the unemployed[7].

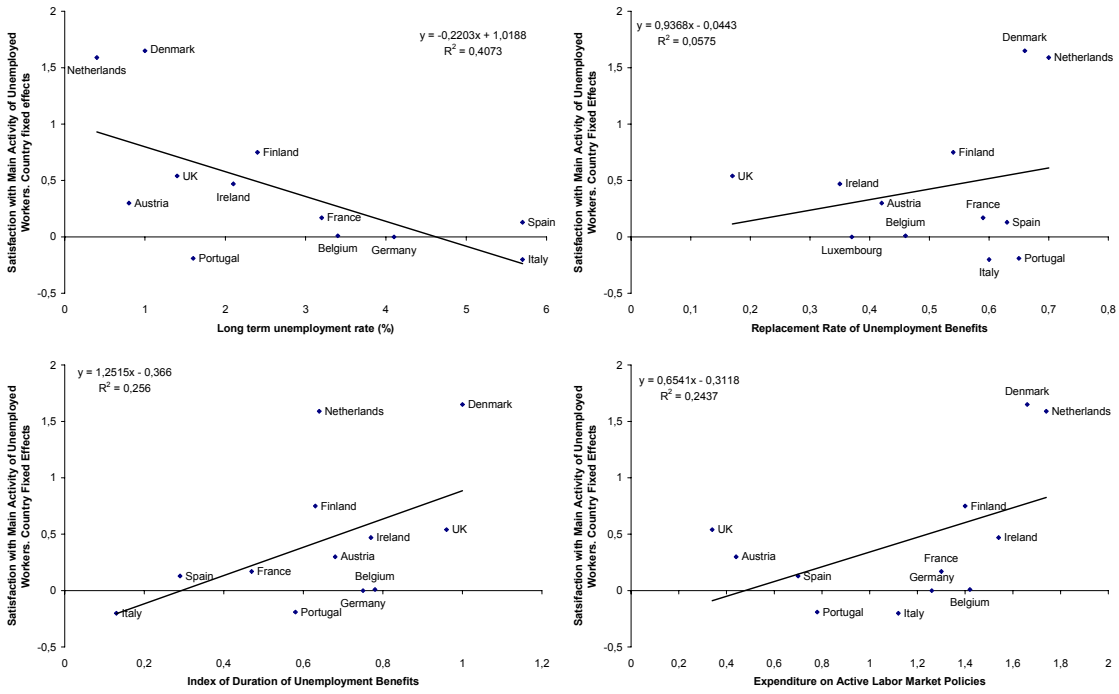
There is a wide literature on the effects of labor market institutions on unemployment. From this literature, there are available some indicators of several elements of labor market institutions that are typically used to characterize the "generosity" and "strictness" of cross-country labor legislation. In what follows we relate several indicators of labor market institutions and the country fixed effects that we have found in the regression on the satisfaction with main activity of the unemployed workers. As for the country fixed effects, we choose those estimated by OLS in the pooled cross-section regarding satisfaction with main activity (see Table A.2). The cross-country coefficients of correlation between these estimates, on one hand, and the corresponding average satisfaction (presented in the column Un. of Table 1) and the country fixed effects (presented in the column E→U of Table 2) are, respectively, 0.921 and

[7] However, it is also likely that these institutions are designed to be more generous in those countries where the costs of unemployment are perceived to be larger. In this case, the causation will run the other way around.

0.817. The indicators of labor market institutions are taken from Nickell et al. (2001), which are the 1995-1999 averages of long-term (more than one year) unemployment rate, replacement rate and duration of unemployment benefits, and the expenditure on active labor market policies as % of GDP.

As seen in Figure 1, there is some correlation between the satisfaction of the unemployed and the aggregate nature of the labor market. First, in countries where long-term unemployment rate is higher, the satisfaction of the unemployed is lower. Also, in countries where unemployment benefits are more generous, as indicated by replacement rates and duration, the satisfaction of the unemployed is higher. Similarly, there is a positive correlation across countries between expenditure on active labor market policies and satisfaction of the unemployed with main activity. Hence, there seems to be an indication that cross-country differences in the satisfaction of the unemployed are related to the labor market functioning and institutions, in particular those regarding the unemployment protection system.

Figure 1. Satisfaction of Unemployed Workers and Labor Market Institutions



7. Conclusions

Among the working age population, one of the most damaging individual experience is found to be unemployment. Many previous studies have confirmed devastating effects of unemployment on individual well-being. Using the data from the European Community Household Panel survey we have examined the factors which affect unemployed workers' well-being (satisfaction) with respect to their situations in activity, income, housing, leisure time and health in Europe.

Unemployment incidence reduces substantially the satisfaction levels with main activity and finance, while it increases substantially the satisfaction level with leisure time. With respect to health, it has a small negative effect. Unemployment duration, on the other hand, shows a small negative effect on individual well-being, suggesting that unemployment has lasting and aggravating effects contradicting the theory of adaptation.

Three other results are worth mentioning. First, there are large cross-country differences in the well-being consequences of unemployment. Much smaller effects of unemployment are observed in Denmark and the Netherlands than in other countries. This difference seems to be due to the differences in functioning and regulations in the labor market. In Denmark and the Netherlands, unemployment rate is lower, whose spells are shorter, and unemployment protection (unemployment benefits and active labor market policies) is greater. Second, with respect to methodology, there are small differences in the effect of unemployment incidence (compared to the employed) but considerable differences in the estimation of well-being determinants among the unemployed sample between cross-section and panel estimates. In the latter case, however, before we discard cross-section results, we have to consider that the panel estimation sample includes only those who are observed unemployed in multiple periods of survey, which leaves the sample to those who are very prone to unemployment, not representative of overall unemployed workers.

Finally, among the unemployed, non-pecuniary factors, such as job prospect, health, and social relation, show significant effects on individual well-being, along with household income. In particular, better job prospect increases substantially the satisfaction levels in all domains of life.

References

Ahn, N. (2002) "Assessing self-assessed health data" Working Paper No. 2002-24, FEDEA, Madrid.

Ahn, N., J.F. Jimeno and A. Ugidos (2004, forthcoming) "Mondays in the sun: Unemployment, time use and consumption patterns in Spain", in Hamermesh and Pfann (eds.) *Time Use in Economics*, Elsevier: Amsterdam.

Argyle, M. (1999) "Causes and correlates of hapiness", in Kahneman, Diener and Schwarz (eds.) *Well-Being: The Foundations of Hedonic Psychology*. New York: Russell Sage Foundation, 353-373.

Bentolila, S. and A. Ichino (2002) "Unemployment and Consumption: Why are Job Losses Less Painful than Expected Near the Mediterranean", mimeo, CEMFI.

Berkman, L.F. and T. Glass (2000) "Social integration, social networks, social support, and health", in LF. Berkman and I. Kawachi, eds., *Social Epidemiology*, Oxford: Oxford University Press, 137-173.

Blanchflower, D.G. and A.J. Oswald (2004) "Well-being over time in Britain and the USA", *Journal of Public Economics* 88, 1359-1386.

Browning, M. and T. Crossley (1998) "Shocks, stocks and socks: consumption smoothing and the replacement of durables during an unemployment spell", mimeo, University of Copenhagen.

Browning M, Moller Dano A and E Heinesen (2003) "Job displacement and health outcomes: A representative panel study", mimeo.

Clark, A.E. (2002) "A note on unhappiness and unemployment duration", mimeo. DELTA, Paris.

Clark, A.E., Diener, E., Georgellis, Y. And R.E. Lucas (2003) "Lags and leads in life satisfaction: A test of the baseline hypothesis", DELTA Working Paper No. 2003-14.

Clark, A.E. And A.J. Osward (1994) "Unhappiness and unemployment", *Economc Journal*, 104, 648-659.

Clark, A.E. and A.J. Oswald (2002) "Well-being in panels", mimeo. DELTA, Paris, France.

Darity Jr. W. And A.H. Goldsmith (1996) "Social psychology, unemployment and macroeconoics", *Journal of Economic Perspective* 10, 121-140.

Diener, E. and R.E. Lucas (1999) "Personality and subjective well-being", in Kahneman, Diener and Schwarz (eds.) *Well-Being: The Foundations of Hedonic Psychology*. New York: Russell Sage Foundation, 213-229.

Easterlin, R.A. (2003) "Building a better theory of well-being", IZA Discussion Paper No. 742.

Frey, B.S. and A. Stutzer (2002) *Happiness & Economics*, Princeton University Press, Princeton, NJ.

Mathers, C. and D. Scholfield, (1998) "The health consequences of unemployment: the evidence", *Medical journal of Australia*, 168, 178-182.

Nivcell, S. L. Nunziata, W. Ochel and G. Quintini (2001): "The Beveridge Curve, Unemployment and Wages in the OECD from the 1960s to the 1990s", CEP Discussion Paper 0502.

Peracchi, F. (2002) "The European Community Household Panel: A review", *Empirical Economics* 27, 63-90.

Ruhm, C.J. (2003) "Healthy living in hard times", NBER, working paper 9468.

Ruhm, C.J. and W.E. Black (2002) "Does drinking really decrease in bad times?", *Journal of Health Economics*, 21, 659-678.

Stewart, J.M. (2001) "The impact of health status on the duration of unemployment spells and the implications for studies of the impact of unemployment on health status", *Journal of Health Economics* 20, 781-796.

Winkelman, L. And R. Winkelman (1998) "Why are the unemployed so unhappy? Evidence from panel data", *Economica* 65, 1-15.

Appendix

Table A.1: Sample means of the unemployed (Table 4)

	Those who are dropped in panel estimation (N=4205)		Those included in both estimation (N=7814)	
Variable	Mean	Std. Dev.	Mean	Std. Dev.
Satisfaction with				
Main activity	2.39	1.54	2.19	1.45
Financial situation	2.29	1.28	2.08	1.22
Housing situation	4.19	1.41	4.00	1.41
Leisure time	4.39	1.43	4.40	1.38
Health status	4.02	0.84	3.93	0.86
Age	35.55	8.78	36.79	8.46
Men	0.48	0.50	0.53	0.50
Education level				
High	0.18	0.38	0.13	0.34
Middle	0.34	0.48	0.32	0.47
Low	0.48	0.50	0.55	0.50
Marital status				
Single	0.38	0.48	0.43	0.50
Married	0.53	0.50	0.48	0.50
Divorced	0.08	0.27	0.08	0.27
Widowed	0.01	0.11	0.01	0.10
Health status				
Very good	0.31	0.46	0.26	0.44
Good	0.45	0.50	0.48	0.50
Fair	0.19	0.40	0.21	0.41
Bad	0.03	0.18	0.04	0.20
Very bad	0.01	0.09	0.01	0.11
UB yes	0.49	0.50	0.45	0.50
Job prospect				
Good	0.15	0.35	0.07	0.26
Fair	0.25	0.43	0.21	0.41
Bad	0.35	0.48	0.41	0.49
Very bad	0.25	0.43	0.31	0.46
Social interaction				
Club yes	0.25	0.43	0.22	0.41
Chat yes	0.79	0.40	0.80	0.40
See yes	0.84	0.37	0.83	0.37
Housing tenure				
Own w/o mortgage				
Own w/ mortgage	0.25	0.44	0.19	0.39
Renter	0.31	0.46	0.31	0.46
Others	0.05	0.23	0.05	0.23
Layoff	0.58	0.49	0.57	0.49
Ln (housing cost)	1.70	1.64	1.49	1.62
Ln (HH income)	6.15	0.68	6.00	0.66
Ln (unemp. Rate)	2.36	0.38	2.41	0.34
Ln (unemp. Dur.)	2.03	1.08	2.69	1.15

Table A.2: OLS Regression of Satisfaction and Health of *Unemployed Workers*
Data: Pooled Cross-section of ECHP (1994-2001)

		Main activity		Finance		Housing		Leisure time		Health	
	Sample mean	Coef,	|t|	Coef,	|t|	Coef,	|t|	Coef,	|t|	Coef,	|t|
Age	36	0,01	0,64	-0,01	1,50	-0,03	3,32	-0,08	7,96	-0,03	4,92
Age-sq.	1375	0,00	0,4	0,00	1,71	0,00	4,43	0,00	8,52	0,00	1,24
Men	0,47	-0,44	23,52	-0,35	22,83	-0,11	6,04	0,12	6,50	0,03	2,78
Education (re: Low)											
Middle	0,33	-0,13	6,22	-0,03	1,48	0,06	3,23	-0,05	2,29	0,12	10,37
High	0,16	-0,14	5,05	-0,02	1,01	0,07	2,79	-0,11	4,06	0,17	11,16
Marital status (re: Single)											
Married	0,50	0,20	9,19	0,41	22,77	0,02	1,03	-0,26	11,88	0,05	3,75
Divorced	0,08	-0,13	3,5	-0,14	4,77	-0,10	2,90	-0,26	7,38	-0,05	2,25
Widowed	0,01	-0,08	0,92	0,04	0,60	0,08	1,08	-0,21	2,52	-0,05	1,01
Health (re: Very bad)											
Very good	0,27	0,54	5,75	0,38	4,93	0,50	5,63	0,95	10,15		
Good	0,48	0,44	4,73	0,29	3,84	0,25	2,88	0,69	7,45		
Fair	0,20	0,34	3,62	0,15	1,95	0,08	0,93	0,52	5,62		
Bad	0,04	0,23	2,31	0,06	0,74	-0,01	0,13	0,48	4,76		
UB yes	0,41	0,03	1,37	0,08	4,23	0,02	1,08	0,00	0,06	0,02	1,67
Job prospect (re: Very bad)											
Good	0,12	0,56	17	0,48	17,76	0,22	6,96	0,14	4,30	0,20	10,60
Fair	0,23	0,30	11,86	0,32	15,69	0,15	6,19	0,06	2,52	0,12	8,22
Bad	0,38	0,12	5,7	0,18	10,08	0,05	2,26	0,02	1,02	0,04	3,19
Offer yes	0,08	0,07	2,09	0,00	0,09	0,01	0,21	-0,04	1,14	-0,05	2,55
Club yes	0,23	0,07	3,27	0,05	3,02	0,06	2,98	0,12	5,77	0,06	4,72
Chat yes	0,80	0,06	2,54	0,12	6,35	0,13	6,01	0,05	2,10	0,06	4,75
See yes	0,84	0,09	3,55	0,06	3,09	0,10	4,37	0,20	7,87	0,08	5,94
Housing tenure (re: Owner without mortgage)											
Own-mort	0,22	0,05	0,94	0,14	3,54	-0,24	5,36	-0,05	1,03	0,05	1,97
Renter	0,32	0,02	0,41	-0,06	1,63	-0,99	22,14	-0,19	3,97	-0,02	0,86
Others	0,05	0,01	0,26	-0,08	2,37	-0,55	14,42	-0,12	3,00	0,00	0,06
Reason for being unemployed (last job lost less than 2 years ago; re: quit)											
Layoff	0,54	0,12	5,04	-0,08	4,10	0,02	0,80	0,05	2,07	0,09	6,73
Others	0,29	-0.02	0.77	-0.03	1.37	-0.04	1.28	0.02	0.61	0.12	6.73
House cost	1,64	-0,03	2,34	-0,06	5,18	0,14	10,66	0,01	0,67	-0,01	1,63
Income	6,08	0,17	10,14	0,46	34,03	0,36	23,13	0,18	10,74	0,06	6,60
Un duration	-0,03	-0,05	4,69	-0,04	3,82	-0,01	1,08	0,00	0,29	-0,1	0,91
Unemp.rate	2,32	0,12	1,64	0,07	1,28	-0,10	1,47	-0,30	4,38	0,21	5,26
Country (re: Germany)											
Denmark	0,05	1,65	23,61	0,83	14,50	-0,01	0,20	0,04	0,64	0,42	10,65
Netherlands	0,05	1,59	21,06	1,12	18,15	0,25	3,51	-0,26	3,47	0,22	5,19
Belgium	0,04	0,01	0,14	0,21	3,62	0,01	0,15	0,11	1,50	0,09	2,23
France	0,11	0,17	2,58	0,03	0,46	0,09	1,46	0,05	0,73	-0,07	1,94
UK	0,03	0,54	7,04	0,09	1,37	-0,19	2,57	-0,39	5,07	0,31	7,05
Ireland	0,04	0,47	6,41	-0,20	3,39	-0,04	0,64	-0,42	5,79	0,43	10,36
Italy	0,20	-0,20	2,95	-0,16	2,89	-0,44	6,81	-0,36	5,29	0,12	2,94
Greece	0,10	-0,16	2,41	-0,11	2,04	-0,58	9,00	-0,25	3,73	0,73	18,96
Spain	0,22	0,13	1,59	-0,14	2,07	-0,09	1,18	-0,31	3,86	0,11	2,35
Portugal	0,06	-0,19	2,65	0,07	1,19	-0,29	4,39	-0,55	7,88	-0,11	2,83
Austria	0,02	0,30	3,38	0,01	0,13	0,01	0,08	0,18	2,01	0,22	4,26
Finland	0,06	0,75	10,2	0,27	4,43	0,04	0,60	0,39	5,30	0,04	0,99
Year (re: 1994)											
1995	0,16	-0,13	4,19	-0,01	0,36	0,05	1,89	0,04	1,48	0,05	2,74
1996	0,16	-0,10	3,3	-0,01	0,22	0,03	1,05	-0,03	0,95	0,02	1,27
1997	0,12	0,00	0,1	0,07	2,68	0,05	1,58	-0,02	0,61	0,04	1,82
1998	0,11	0,07	2,04	0,16	5,55	0,06	1,88	-0,03	0,93	0,02	0,84
1999	0,10	0,09	2,39	0,16	5,15	0,01	0,27	-0,14	3,57	0,03	1,55
2000	0,09	0,18	4,07	0,25	7,01	-0,01	0,32	-0,20	4,74	0,06	2,63
2001	0,08	0,19	4,05	0,24	6,18	0,00	0,01	-0,21	4,45	0,07	2,43
Constant		0,10	0,34	-1,26	5,31	2,29	8,27	4,89	16,89	3,54	22,32
R-squared		0.219		0.29		0.18		0.09		0.18	
Obs.	24,659	24,659		24,659		24,659		24,659		24,659	

Note: Housing cost, household income, unemployment rate and unemployment duration in months are all in logarithm.

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