Preliminary – comments are welcome

Happiness in Europe

Cross-country differences in the determinants of subjective Well-Being

by

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Abstract

Most people are assumed in a broader sense to pursue happiness in their life. Economic theory deals implicitly with the concept of happiness interpreted as individual utility assumed to depend on the interaction between a preference structure and budget restrictions. Most empirical studies have however failed to find the predicted relationship between happiness, measured by the response to survey questions regarding well-being or quality of life in general, and primarily income. In a recent cross-country study using Eurobarometer data for 15 countries, Bjørnskov, Datta Gupta and Pedersen (2005), it was found that, not the growth of income per capita in a country, but accelerated growth, resulted in an increase in average values of reported well-being, i.e. it appeared that adaptation occurs not to the level, but to the growth rate of income. In the present paper, we are using the availability of individual panel data in the European Community Household Panel (ECHP) to analyse the impact on reported well-being from a number of level variables as well as from changes in selected variables from one wave to another for a number of the EU countries. We include conventional economic variables as well as a number of attitude indicators available in the ECHP.

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1 Introduction

Economic success or failure is conventionally measured by a number of standard indicators, i.e. the real GDP growth, level and trend in unemployment and measures of income distribution, poverty and social exclusion. In the present study we look instead at the level of individual well-being or satisfaction based on the response to survey questions in the European Community Household Panel (ECHP). The details of the study are reported below. Here we summarize the main findings regarding determinants with a significant impact on the level of and the change in well-being based on a number of probit and multinomial probit analyses reported below. The dependent variable in the analyses is an indicator of the level of subjective well-being in the first part of the paper, followed by analyses where the dependent variable is the change in this indicator.

Regarding determinants of the level of subjective well-being, the main findings are

- A significant positive impact from equivalence scale adjusted income which is in contrast to the weak or lacking relationship found with macro data, i.e. GDP per capita relative to measures of average happiness or well-being
- A significant positive impact from an improved income situation compared with last year
- Dominance of significant positive impact from belonging to the 60+ group
- Significantly lower satisfaction with main activity for women in the Southern European EU countries
- Significantly higher level of satisfaction for married and cohabitating people
- Significantly higher satisfaction for people with higher than primary education, especially among those with third level education
- Significant negative impact from transitions from job to unemployment
- Positive impact from both level of and change in health indicator

Regarding determinants of the change in subjective well-being, the main findings are

- Improvements in health situation has a significantly positive or an insignificant impact on changes in well-being
- Transitions from a job to unemplyment has a significant impact on the probability of a decline in well-being in all cases
- A transition from unemployment to a job has a – nearly as clear – impact on the probability of an increase in well-being
- Regarding the effect of an exit from the labour force, the dominant result is a positive impact on the probability of an increase in subjective well-being

2. Data and measures of subjective well-being

The present study is based on a subset of data from the ECHP. In the first part of the paper we use data for four countries, Denmark, France, Ireland and Italy, as being representative for each of four different types of European welfare states. Denmark is included as representative for the Nordic or Social democratic model, France as representative for the so-called continental type of welfare state, Ireland represents the liberal welfare state, and Italy, finally, is chosen as representative for the Southern European type of welfare state.

In the present preliminary study we narrow the focus further by using data only from two of the most recent waves of the ECHP, i.e. waves 6 and 7, collected in respectively 1999 and 2000. Our cross-sectional analyses below are based on wave 7, while analyses of the impact on subjective well-being from changes in different determinants are based on both waves 6 and 7.

The ECHP does not contain any direct question concerning happiness or satisfaction with life in general. In the following we use the response to a question regarding satisfaction with ones main activity as indicator for the level of subjective well-being. The variable, called pk001 in the ECHP, is categorical with six different response levels. Further, we include a number of explanatory background variables in the analysis, all coming from the ECHP. Section 3 contains some brief illustrations of the cross-country variation in the average value of pk001 and the distribution on response categories in the four countries selected for further analyses below.

3. Trend and cross-country differences in measures of well-being

Only few data sources contain indicators of well-being collected over extended periods of time. The Eurobarometer data is the longest data set collecting measures of well-being in a consistent way for the EU countries. Eurobarometer data have been collected since 1972 for an increasing number of countries along with the entry of new member states to the European Union. The Eurobarometer has, however, not the panel property of the ECHP as it is a sequence of cross-section surveys.

To give an impression of the cross-country range in the well-being indicators, Figure 1 shows the average value of the ECHP variable pk001 for wave 7 collected in 2000. There appears to be a fairly clear North-South divide, with the four Southern European EU countries having the lowest average values of the satisfaction indicators, and the smaller Northern and Continental member states having the highest average values.

Next, Figure 2 shows the distribution on response categories for pk001 in wave 7 in each of the four countries which are in focus in the first part of the paper. For Italy, the distribution is nearly symmetrical while especially Denmark and Ireland have most of the density in the top categories.

Figure 1. Average value of PK001 in wave 7

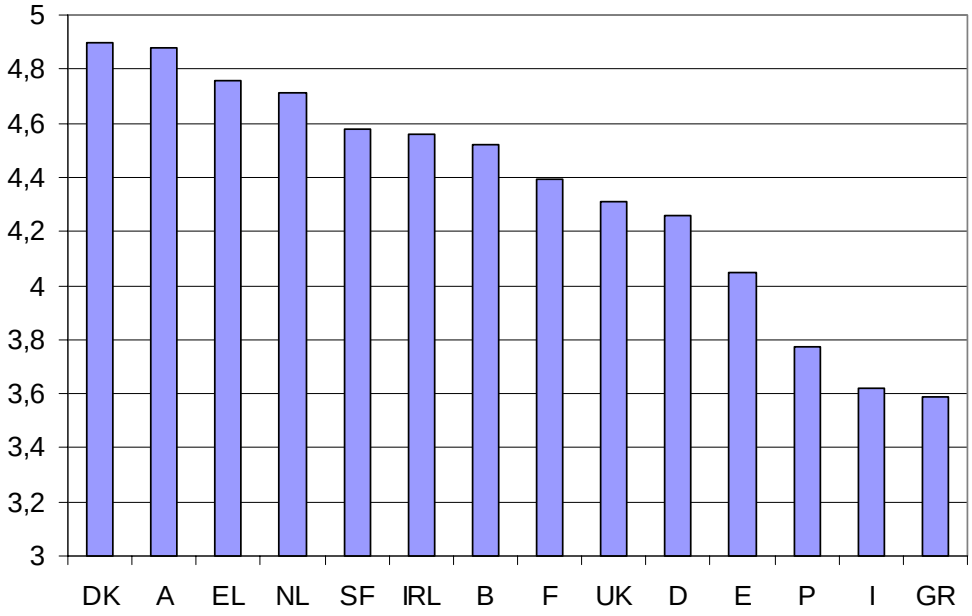
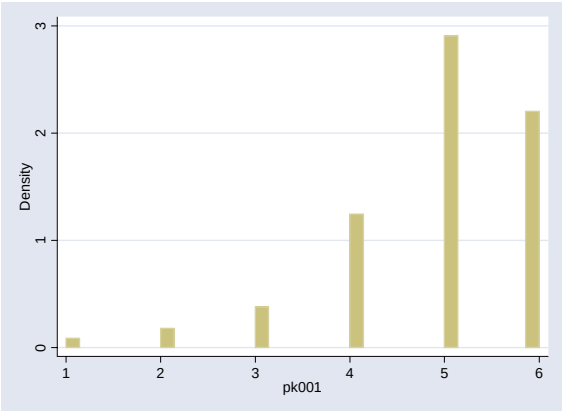
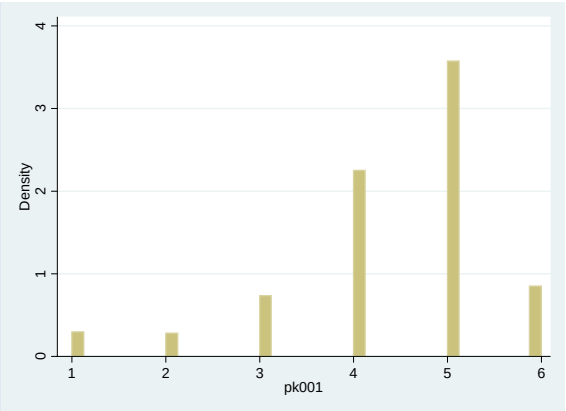


Figure 2. Distribution on response categories to PK001. Wave 7.

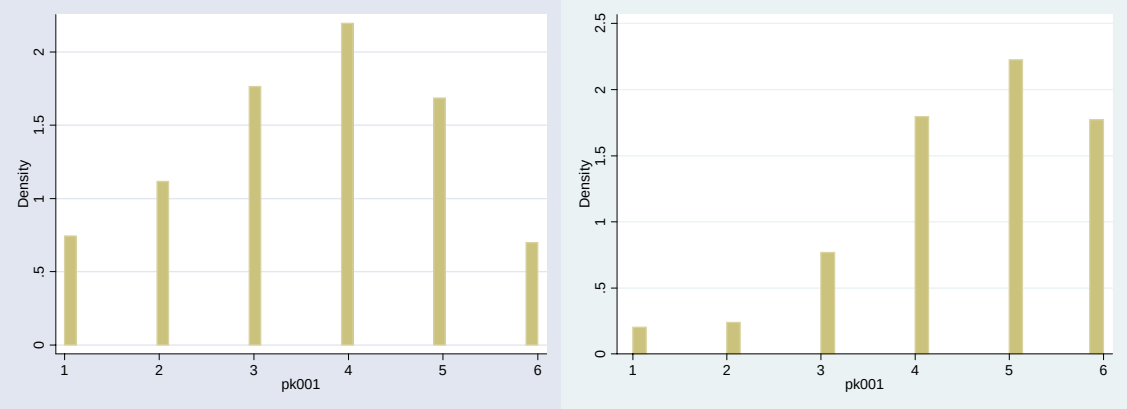
Denmark



France

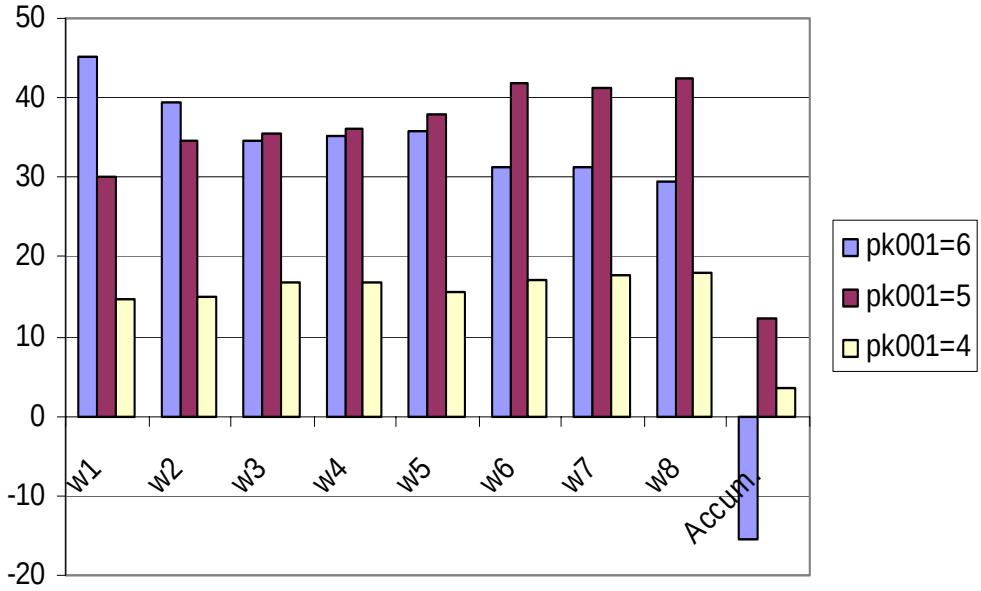


Italy Ireland



An interesting question is whether the distribution on response categories in pk001 is stable over the 8 waves of the ECHP. A very preliminary indication with one country, Denmark as case, is given in Figure 3 showing the shares for the three top categories over the 8 waves. The top category 6 is dedreasing through the panel, while categories 5 and 4 go up. Overall, however, the total shares in categories 4 – 6 is extremely stable falling with 0,2 percentage points from wave 1 to wave 8.

Figure 3. The relative distribution on top three response categories in PK001. Denmark as case.



4. Model and estimation results

In the estimations reported in this Section we use the ECHP variable reporting the level of satisfaction with the individual's main activity as the measure of individual subjective well-being.

In Table 1 we present the results from a number of probit analyses where the dependent variable is a dichotomous transformation of the well-being or satisfaction measure, pk001, set at 1 for pk001={4,5,6} and set at 0 for pk001={1,2,3}. The main hypothesis tested in Table 1 is whether there is an impact from the level of income on the reported level of well-being using micro level variables which would be in contrast to the typical lack of finding any significant relationship between these variables at the macro level in cross-country studies.

Our income variable, eqiinc, is defined as disposable household income divided by the number of members in the household using the OECD equivalence scale. For reasons of coefficient scale, we divide the equivalence scale adjusted income with 1.000.000 before the estimations. The result in Table 1 is the finding of a highly significant impact on well-being from the level of income measured in this way in all four countries.

We include a further income indicator, i.e. the variable incimprove, set at 1 if the household reports, in the answer to hf015, that the present financial situation is either clearly or somewhat better than a year ago and set at 0 if the financial situation is either unchanged or has deteriorated. Here too, we find a positive and significant impact. The partial conclusion tends to be that the higher the income and the more positive the income profile since last year, the higher is the level of subjective well-being.

Two demographic variables come out with a highly significant impact in all four countries. Living in a couple has a significantly positive impact on well-being. This is measured by the variable cohab set at 1 for individuals living in a couple, married or co-habitating, and set at 0 otherwise. This finding is however not sufficient to answer the question set up in the title of Stutzer and Frey (2005), i.e. "*Does Marriage make People Happy or do Happy People get Married?"*. The other strong impact on well-being comes from the variable badhealth set at 1 if the response to the question (ph001) "How is your health in general?" is "fair, bad or very bad" and set at 0 if the answer is "good or very good". Not surprisingly, a less than satisfactory health situation has a significantly negative impact on satisfaction.

The age of the respondent is introduced in three intervals, the core age group relative to the labour force 25-59 years, people aged 60 and older, and those yonger than 25 as the reference group. The most clear result is found for the 60+ group where the coefficient, i.e. the measure of well-being

relative to the young, is significantly positive for Denmark, France and Ireland. In Italy the coefficient is negative and significant in the first estimation with fairly few covariates while it becomes insignificant when more covariates are included in the estimation. For the middle aged group, the most clear result is found for Italy with a significantly negative coefficient in all specifications. In France the coefficient is negative and significant in the setting with few covariates. The two remaining demographic variables are a gender dummy female, set at 1 for women and a dummy variable, cu12, set at 1 if there is one or more children younger than 12 years in the household. The only clear impact is found for Italy where women are found to have a significantly lower level of satisfaction regarding their main activity than men. Considering the steep decline in fertility to a very low level in Italy, it is interesting to note the significantly positive coefficient to Cu12 in contrast to the lack of significance in the other three countries where fertility is high – by European standards.

Turning to the education indicators, two dummy variables for, respectively secondary and third level of education with primary education as the reference category, we once again find the most clear results for Italy with both categories of education implying a higher level of satisfaction. For the other three countries, the only significant effect is found for secondary education in Denmark. Next, we turn to the variable mainacti which is set at 1 for people who are in the labour force, i.e. working 15 or more hours per week or unemployed, and set at 0 for people who are economically inactive. No clear results are found for this variable in relation to the level of satisfaction or happiness. It is insignificant for Denmark and Ireland, significantly negative for France, but significantly positive for Italy. For France, being middle aged and being in the labour force is reinforcing in creating a negative impact on well-being, while the two variables counteract each other in Italy.

Finally, we have included two neighbourhood indicators which are available in the ECHP, i.e. whether pollution and/or crime is seen as a problem where the respondent lives. The outliers here, regarding results, are Denmark where no effects are found, and France where both indicators reduce well-being significantly.

Table 1.
Probit on left hand variable taking value 0 for pk001={1,2,3} and value 1 for pk001={4,5,6}

Denmark – probit for dichotomous variable - equal split of pk001 - phase 1a, 1b and 1c

Variable						
eqiinc	2.118	2.090	1.427	1.365	1.356	1.292
	(3.56)**	(3.53)**	(2.35)*	(2.27)*	(2.24)*	(2.16)*
incimprove	0.202		0.165		0.180	
	(2.75)**		(2.20)*		(2.39)*	
yr25til59	-0.058	-0.062	0.031	0.023	0.047	0.037
	(0.58)	(0.62)	(0.29)	(0.22)	(0.44)	(0.35)
yr60plus	0.260	0.213	0.620	0.591	0.605	0.573
	(2.34)*	(1.95)	(5.00)**	(4.80)**	(4.86)**	(4.64)**
female	-0.136	-0.138	-0.087	-0.089	-0.088	-0.089
	(2.32)*	(2.37)*	(1.46)	(1.48)	(1.46)	(1.48)
cohab	0.217	0.220	0.177	0.180	0.167	0.171
	(3.22)**	(3.28)**	(2.57)*	(2.62)**	(2.41)*	(2.47)*
childunder12	0.086	0.087	0.006	0.003	0.006	0.004
	(1.18)	(1.19)	(0.07)	(0.04)	(0.09)	(0.05)
mainacti			0.153	0.170	0.139	0.157
			(1.74)	(1.93)	(1.57)	(1.78)
secondeduc			0.146	0.149	0.154	0.156
			(1.95)	(1.99)*	(2.04)*	(2.08)*
thirdeduc			0.040	0.051	0.046	0.056
			(0.45)	(0.57)	(0.51)	(0.63)
badhealth			-0.542	-0.547	-0.538	-0.543
			(7.75)**	(7.82)**	(7.67)**	(7.75)**
pollution					-0.209	-0.205
					(1.74)	(1.71)
crime					-0.135	-0.124
					(1.44)	(1.33)
Constant	0.893	0.952	0.856	0.897	0.894	0.938
	(7.79)**	(8.47)**	(6.77)**	(7.20)**	(7.01)**	(7.45)**
Observations	3749	3753	3748	3752	3744	3748

France – probit for dichotomous variable - equal split of pk001 - phase 1a, 1b and 1c

Variable						
eqiinc	3.877	3.832	3.645	3.540	3.716	3.612
	(11.12)**	(11.02)**	(9.69)**	(9.45)**	(9.84)**	(9.60)**
incimprove	0.269		0.255		0.254	
	(6.28)**		(5.76)**		(5.73)**	
yr25til59	-0.138	-0.145	0.016	0.008	0.016	0.009
	(2.55)*	(2.68)**	(0.25)	(0.13)	(0.26)	(0.14)
yr60plus	0.148	0.099	0.288	0.256	0.279	0.248
	(2.47)*	(1.67)	(4.07)**	(3.64)**	(3.94)**	(3.52)**
female	-0.016	-0.018	-0.031	-0.030	-0.029	-0.028
	(0.53)	(0.57)	(0.95)	(0.93)	(0.90)	(0.88)
cohab	0.192	0.201	0.190	0.199	0.188	0.197
	(5.13)**	(5.39)**	(4.94)**	(5.18)**	(4.87)**	(5.12)**
childunder12	0.049	0.057	0.033	0.040	0.036	0.043
	(1.29)	(1.51)	(0.84)	(1.02)	(0.92)	(1.09)
mainacti			-0.230	-0.215	-0.232	-0.217
			(5.09)**	(4.78)**	(5.14)**	(4.82)**
secondeduc			0.034	0.039	0.032	0.038
			(0.62)	(0.72)	(0.59)	(0.69)
thirdeduc			0.056	0.076	0.060	0.080
			(1.30)	(1.76)	(1.39)	(1.85)
badhealth			-0.511	-0.512	-0.497	-0.498
			(14.98)**	(15.04)**	(14.51)**	(14.58)**
pollution					-0.138	-0.143
					(3.27)**	(3.40)**
crime					-0.128	-0.124
					(3.18)**	(3.09)**
Constant	0.519	0.578	0.790	0.833	0.828	0.871
	(9.30)**	(10.53)**	(11.79)**	(12.52)**	(12.26)**	(12.99)**
Observations	9685	9687	9516	9518	9512	9514

Ireland – probit for dichotomous variable - equal split of pk001 - phase 1a, 1b and 1c

Variable						
eqiinc	23.205	27.673	18.486	21.393	18.953	21.852
	(4.44)**	(5.28)**	(3.30)**	(3.80)**	(3.35)**	(3.85)**
incimprove	0.301		0.285		0.287	
	(5.74)**		(5.36)**		(5.35)**	
yr25til59	0.010	0.003	0.066	0.056	0.063	0.054
	(0.12)	(0.04)	(0.79)	(0.68)	(0.75)	(0.65)
yr60plus	0.271	0.235	0.443	0.431	0.440	0.428
	(3.02)**	(2.64)**	(4.47)**	(4.37)**	(4.42)**	(4.33)**
female	0.067	0.064	0.073	0.081	0.074	0.082
	(1.33)	(1.28)	(1.35)	(1.51)	(1.36)	(1.52)
cohab	0.157	0.175	0.147	0.167	0.150	0.171
	(2.63)**	(2.96)**	(2.42)*	(2.77)**	(2.47)*	(2.83)**
childunder12	-0.004	-0.002	-0.024	-0.026	-0.026	-0.029
	(0.06)	(0.04)	(0.39)	(0.43)	(0.43)	(0.48)
mainacti			0.027	0.066	0.023	0.062
			(0.42)	(1.06)	(0.36)	(0.99)
secondeduc			-0.004	0.000	-0.004	0.001
			(0.07)	(0.00)	(0.06)	(0.01)
thirdeduc			0.007	0.024	0.007	0.024
			(0.09)	(0.28)	(0.08)	(0.29)
badhealth			-0.465	-0.476	-0.463	-0.474
			(7.14)**	(7.34)**	(7.09)**	(7.30)**
pollution					-0.265	-0.248
					(2.47)*	(2.34)*
crime					0.051	0.067
					(0.53)	(0.71)
Constant	0.422	0.505	0.486	0.542	0.497	0.552
	(5.00)**	(6.08)**	(5.04)**	(5.67)**	(5.12)**	(5.73)**
Observations	3646	3667	3645	3666	3626	3647

Italy – probit for dichotomous variable - equal split of pk001 - phase 1a, 1b and 1c

Variable						
eqiinc	34.291	34.503	28.823	28.999	28.872	29.040
	(27.88)**	(28.14)**	(22.34)**	(22.54)**	(22.34)**	(22.54)**
incimprove	0.121		0.098		0.101	
	(3.25)**		(2.60)**		(2.66)**	
yr25til59	-0.170	-0.172	-0.120	-0.122	-0.120	-0.122
	(4.44)**	(4.52)**	(3.03)**	(3.08)**	(3.01)**	(3.08)**
yr60plus	-0.348	-0.356	-0.011	-0.014	-0.005	-0.009
	(8.28)**	(8.49)**	(0.23)	(0.31)	(0.10)	(0.19)
female	-0.177	-0.180	-0.140	-0.143	-0.140	-0.142
	(8.12)**	(8.29)**	(6.03)**	(6.16)**	(6.02)**	(6.13)**
cohab	0.195	0.197	0.257	0.258	0.259	0.260
	(7.39)**	(7.47)**	(9.51)**	(9.58)**	(9.55)**	(9.64)**
childunder12	0.143	0.140	0.091	0.088	0.092	0.090
	(5.13)**	(5.06)**	(3.21)**	(3.12)**	(3.25)**	(3.18)**
mainacti			0.075	0.076	0.076	0.077
			(2.71)**	(2.74)**	(2.72)**	(2.75)**
secondeduc			0.249	0.248	0.252	0.251
			(9.60)**	(9.56)**	(9.69)**	(9.67)**
thirdeduc			0.375	0.372	0.381	0.379
			(8.04)**	(8.00)**	(8.14)**	(8.11)**
badhealth			-0.347	-0.353	-0.352	-0.357
			(13.80)**	(14.06)**	(13.93)**	(14.16)**
pollution					-0.057	-0.059
					(1.65)	(1.72)
crime					-0.095	-0.098
					(2.83)**	(2.93)**
Constant	-0.320	-0.307	-0.401	-0.389	-0.385	-0.372
	(8.38)**	(8.10)**	(9.36)**	(9.13)**	(8.92)**	(8.66)**
Observations	14064	14142	14020	14098	13974	14051

In Table 2 we report results from testing of two hypotheses. The first one, relevant for the four left most columns in Table 2, is a test of whether the level of well-being is influenced by a number of changes in determinants besides depending on the level of other, more stationary, determinants. In the two last columns in Table 2 the dependent variable is a simple specification of the change in reported well-being between waves 6 and 7. If pk001 changes from pk001={1,2,3} in wave 6 to pk001={4,5,6} in wave 7, the change variable is set at 1 indicating a jump up in well-being. The reverse change, from pk001={4,5,6} to pk001={1,2,3} is set at -1, and a stationary level of well-being measured in this way is set at 0. The coefficients in the last two estimations in Table 2 come from a multinomial probit where a decrease respectively an increase in well-being is set against a stationary level.

First, we report the results from the probit estimations in the four left most columns in Table 2 where the dependent variable is the level of well-being set at 1 if pk001={4,5,6} and set at 0 for

pk001={1,2,3}. For the level of individual equivalence scale adjusted income used in Table 1, we substitute the change between waves 6 and 7 relative to the average change for all individuals between the two waves. The hypothesis is the existence of an impact on individual well-being depending on how own income changes relative to the average change in society at large. In that sense it represents a simple test of Duesenberrys idea in consumption theory of the importance for own consumption of consumption for a reference group of other individuals. In the present setting, the idea is to test if individual well-being is higher, the stronger individual income increases relative to the average in society considered as "the reference group".

Besides this income variable, we include a number of other change variables. The first one, deltahealth, is defined as the difference between the values of the health variable in waves 7 and 6. The range in deltahealth is (-4,4) with 4 indicating the highest improvement in reported health between the two waves. The hypothesis underlying the specification is that improvements in health implies a higher level of well-being. The next variable, deltacohab, is correspondingly defined as the change in the variable cohab between waves 6 and 7, with 1 being the value if a person has entered marriage or cohabitation, -1 is the value in case of divorce or exit from cohabitation and 0 indicates an unchanged situation. The next three variables are indicators for changes in labour market status between waves 6 and 7, with eu indicating a change from employment to unemployment, ue indicating the reverse movement and finally with ln indicating an exit from the labour force to become economically inactive. Further, we test a simple hypothesis of "acceleration" in the relative change in income variable by including also the difference between the change in equivalent income from waves 6 and 7, and the corresponding change in equivalent income between waves 5 and 6. This is the variable chg2meaneqiinc in Table 2. Besides these change variables, we include a number of level variables, i.e. age interval, gender, dummy for child/children younger than 12 and the two educational dummies which are used also in Table 1.

Looking at the results for the four countries in the probit analyses of the level of well-being we find a significant and positive impact from the relative change in the income variable only for Italy, and a corresponding negative and significant acceleration impact, also only for Italy. With Ireland as the exception, we find a significant and positive impact from improvement in health on the current level of well-being. Compared with the results in Table 1, we thus have that not only the current level of the health indicator, but also the change, has a significant impact on the current level of well-being. Changes in civil status has no immediate impact on the level of well-being, in contrast to the significant impact from current state of cohabitation, cf. Table 1.

Turning to the labour market status changes, we find for all four countries a significantly negative impact on the current level of satisfaction as a consequence of a transition from being in a job to unemployment. This corresponds to the findings in Ahn et al. (2006), working with ECHP data, of substantial reductions in satisfaction levels from unemployment, however with quite big differences between countries. A change from unemployment in wave 6 to being in a job in wave 7 has no significant impact on the level of current well-being in Denmark, France and Italy, probably reflecting that entry to the job might have occurred well before the ECHP interview, in some cases from only a short spell of unemployment. The negative and significant coefficient found for Ireland seems to be difficult to interpret, especially considering the fact that Ireland follows the general pattern of a reduction in satisfaction from a transition into unemployment. A possible explanation is that people who experience this change have been unemployed for shorter or longer time before the current interview. This could imply, either no impact on current well-being if the unemployment experience was either short or lies somewhat back in time, or a negative impact relative to having not experienced unemployment. Next, we find that leaving the labour force has a significant negative impact on the current *level* of satisfaction in Italy, while no significance is found for the other three countries.

Turning to the demographic variables, the coefficient pattern to being 25-59 years old shows the same lack of significance in Denmark and Ireland as in Table 1, but an opposite sign pattern compared with Table 1 for France and Italy. An explanation might be that, as income peaks in this age group, the variable could "pick up" an income level effect in Table 2. The coefficient to being 60+ is significant and positive. The coefficients to gender and having a child younger than 12 shows the same as in Table 1, i.e. a negative effect for women and a positive effect from having a child younger than 12 in Italy. Finally, the education dummies are mostly significant, probably "picking up" for the excluded level of income variable.

Next, we go on to look at the results in the two last columns of Table 2, where the dependent variable in the multinomial probit analysis takes on the value -1 for decreases in satisfaction, as defined above, and the value 1 for increases in satisfaction between waves 6 and 7. The interpretation of the signs of coefficients is thus depending on which column we are looking upon. Regarding the column for -1, a positive coefficient means that higher values of this variable increases the probability of a decline in satisfaction, and vice versa for a negative coefficient. Correspondingly, a positive coefficient to a variable in the +1 column implies that higher values of this variable increases the probability of a jump up in satisfaction.

Looking first at the change in income variable we find a more specific interpretation of the result for Italy, i.e. a better than average performance regarding income reduces the probability of a decline in satisfaction. Once again Ireland is an exception when we look at the effects from changes in health. In the other countries the dominant result is that better health reduces the probability of a decline in satisfaction, respectively increases the probability of en increase. A transition from a job to unemployment consistently increases the probability of a reduction in well-being. The reverse transition has a significant positive impact on the probability of an increase in satisfaction in all four countries. For Italy, it furthermore means a reduction in the probability of a decline in satisfaction, while it is difficult to interpret the result for Ireland, i.e. that transition to a job should *increase* the probability of a decline in satisfaction. Finally, a transition out of the labour force consistently implies a higher probability of an increase in satisfaction. Note, that this is not inconsistent with the finding for Italy of a negative impact on the wave 7 *level* of satisfaction.

Table 2.

Denmark – probit for equal scale (pk001={1,2,3} and pk001={4,5,6}) and multinomial probit for change in equal scale with change-in-change covariate (base=0)

	Probit	Provit	Probit	Probit	Multinomial probit (base 0)	
					chgsatspliteq=-1	chgsatspliteq=1
chgmeaneqiinc	0.311	0.368	-0.680	-0.603	0.124	0.134
	(0.65)	(0.66)	(1.26)	(1.30)	(1.04)	(0.99)
deltahealth	0.102***	0.103***	0.102***	0.100***	-0.100***	0.0533**
	(0.020)	(0.020)	(0.021)	(0.021)	(0.031)	(0.027)
deltacohab	-0.0913	-0.0336	-0.195	-0.148	0.240	-0.0761
	(0.14)	(0.14)	(0.15)	(0.15)	(0.22)	(0.21)
eu	-0.644***	-0.593***	-0.531***	-0.480**	0.843***	0.604*
	(0.19)	(0.19)	(0.20)	(0.20)	(0.28)	(0.31)
ue	-0.0517	0.0234	-0.124	-0.0453	0.118	1.468***
	(0.25)	(0.25)	(0.25)	(0.25)	(0.43)	(0.27)
ln	-0.173	-0.121	-0.267*	-0.195	0.0706	0.784***
	(0.14)	(0.15)	(0.15)	(0.16)	(0.25)	(0.19)
lagyr25til59		0.185*		0.189*		
		(0.100)		(0.11)		
lagyr60plus		0.424***		0.414***		
		(0.12)		(0.13)		
female		-0.119*		-0.116*		
		(0.062)		(0.065)		
childunder12		0.0445		0.0307		
		(0.073)		(0.077)		
secondeduc		0.266***		0.264***		
		(0.078)		(0.082)		
thirdeduc		0.194**		0.235**		
		(0.090)		(0.094)		
chg2meaneqiinc			0.642	0.626		
			(0.78)	(0.80)		
Constant	1.355***	1.016***	1.369***	1.015***	-2.132***	-2.180***
	(0.032)	(0.11)	(0.034)	(0.12)	(0.050)	(0.051)
Observations	3473	3427	3131	3130	3467	3467

Standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1

France – probit for equal scale (pk001={1,2,3} and pk001={4,5,6}) and multinomial probit for change in equal scale with change-in-change covariate (base=0)

	Probit	Probit	Probit	Probit	Multinomial probit (base 0)	
					chgsatspliteq=-1	chgsatspliteq=1
chgmeaneqiinc	0.280	0.295	1.541*	1.500	-0.804*	-0.0439
	(0.29)	(0.29)	(0.93)	(0.94)	(0.45)	(0.59)
deltahealth	0.0468***	0.0495***	0.0454***	0.0481***	-0.0611***	0.0428**
	(0.011)	(0.011)	(0.011)	(0.011)	(0.018)	(0.017)
deltacohab	0.0975	0.132	0.123	0.158	0.0641	0.265
	(0.10)	(0.11)	(0.11)	(0.11)	(0.17)	(0.16)
eu	-1.489***	-1.386***	-1.483***	-1.374***	1.838***	0.433
	(0.13)	(0.13)	(0.13)	(0.14)	(0.18)	(0.27)
ue	0.256	0.324*	0.204	0.280*	0.231	2.808***
	(0.16)	(0.17)	(0.16)	(0.17)	(0.38)	(0.18)
ln	0.0687	0.106	0.0975	0.141	0.109	0.849***
	(0.10)	(0.10)	(0.11)	(0.11)	(0.17)	(0.13)
lagyr25til59		0.134**		0.108*		
		(0.058)		(0.062)		
lagyr60plus		0.391***		0.377***		
		(0.067)		(0.071)		
female		-0.0459		-0.0529		
		(0.033)		(0.034)		
childunder12		0.0263		0.0470		
		(0.039)		(0.040)		
secondeduc		0.174***		0.150***		
		(0.056)		(0.057)		
thirdeduc		0.242***		0.248***		
		(0.043)		(0.044)		
chg2meaneqiinc			-0.728	-0.694		
			(0.50)	(0.51)		
Constant	1.028***	0.790***	1.033***	0.811***	-1.926***	-1.951***
	(0.017)	(0.061)	(0.017)	(0.066)	(0.028)	(0.029)
Observations	8722	8604	8398	8297	8716	8716

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Ireland – probit for equal scale (pk001={1,2,3} and pk001={4,5,6}) and multinomial probit for change in equal scale with change-in-change covariate (base=0)

	Probit	Probit	Probit	Probit	Multinomial probit (base 0)	
					chgsatspliteq=-1	chgsatspliteq=1
chgmeaneqiinc	-1.741	-1.270	13.87	13.61	-1.623	6.926
	(4.52)	(4.68)	(11.9)	(12.2)	(7.01)	(9.21)
deltahealth	0.0308*	0.0270	0.0229	0.0244	0.00494	0.0147
	(0.016)	(0.017)	(0.017)	(0.017)	(0.027)	(0.027)
deltacohab	0.0859	0.120	0.0950	0.135	-0.467	-0.504
	(0.21)	(0.21)	(0.22)	(0.22)	(0.34)	(0.33)
eu	-1.575***	-1.472***	-1.687***	-1.616***	1.726***	0.0320
	(0.24)	(0.24)	(0.26)	(0.26)	(0.35)	(0.60)
ue	-0.492**	-0.461**	-0.553***	-0.485**	0.940***	1.755***
	(0.19)	(0.19)	(0.20)	(0.20)	(0.34)	(0.28)
ln	0.0259	0.0513	0.0858	0.121	0.0832	0.457**
	(0.13)	(0.14)	(0.14)	(0.14)	(0.22)	(0.19)
lagyr25til59		0.0825		0.0694		
		(0.079)		(0.081)		
lagyr60plus		0.272***		0.260***		
		(0.095)		(0.097)		
female		0.0372		0.0499		
		(0.053)		(0.054)		
childunder12		0.00997		0.0171		
		(0.061)		(0.062)		
secondeduc		0.0936		0.0879		
		(0.061)		(0.062)		
thirdeduc		0.260***		0.252***		
		(0.080)		(0.082)		
chg2meaneqiinc			-10.35	-10.31		
			(7.66)	(7.86)		
Constant	0.981***	0.779***	1.005***	0.791***	-1.792***	-1.780***
	(0.027)	(0.089)	(0.028)	(0.091)	(0.046)	(0.045)
Observations	3467	3370	3282	3282	3250	3250

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Italy – probit for equal scale (pk001={1,2,3} and pk001={4,5,6}) and multinomial probit for change in equal scale with change-in-change covariate (base=0)

	Probit	Probit	Probit	Probit	Multinomial probit	
					chgsatspliteq=-1	chgsatspliteq=1
chgmeaneqiinc	4.575***	5.009***	11.20***	10.32***	-9.433***	1.094
	(1.62)	(1.67)	(3.12)	(3.22)	(2.87)	(2.93)
deltahealth	0.0378***	0.0308***	0.0400***	0.0324***	-0.0188	0.0293**
	(0.0070)	(0.0072)	(0.0073)	(0.0074)	(0.012)	(0.013)
deltacohab	0.0827	0.0136	0.0690	0.0128	-0.00425	0.115
	(0.072)	(0.074)	(0.077)	(0.078)	(0.13)	(0.13)
eu	-1.070***	-1.114***	-1.015***	-1.060***	0.893***	-0.0121
	(0.13)	(0.14)	(0.14)	(0.14)	(0.17)	(0.24)
ue	-0.0395	-0.115	-0.0319	-0.110	-0.569**	1.423***
	(0.082)	(0.084)	(0.086)	(0.087)	(0.23)	(0.12)
ln	-0.389***	-0.387***	-0.381***	-0.381***	0.0803	0.293***
	(0.065)	(0.066)	(0.068)	(0.068)	(0.11)	(0.11)
lagyr25til59		0.166***		0.151***		
		(0.036)		(0.037)		
lagyr60plus		0.105**		0.0840*		
		(0.043)		(0.044)		
female		-0.209***		-0.210***		
		(0.022)		(0.023)		
childunder12		0.0598**		0.0508*		
		(0.027)		(0.028)		
secondeduc		0.408***		0.403***		
		(0.026)		(0.027)		
thirdeduc		0.675***		0.656***		
		(0.045)		(0.046)		
chg2meaneqiinc			-5.320***	-4.367**		
			(1.87)	(1.92)		
Constant	0.172***	-0.0628	0.168***	-0.0394	-1.451***	-1.599***
	(0.011)	(0.039)	(0.012)	(0.040)	(0.020)	(0.021)
Observations	13239	13036	12385	12385	13171	13171

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Finally, we extend the analysis in Table 2 of the four welfare state type representative countries to six more EU countries in Table 3. Looking first at the results regarding the level of satisfaction variable we find a significant positive impact from the income change variable in three countries, Spain, Greece and Portugal and a positive, but less significant coefficient in Finland. Combined with the result in Table 2, this seems to indicate that income performance relative to the rest of society is important for the level of satisfaction with main activity in the Southern European countries. Changes in reported health are important for the level of satisfaction, except for Belgium and Finland, while changes in civil status is insignificant in all six countries.

Turning to the labour market variables, transitions to unemployment from a job has a negative effect on the level of well-being in all countries. Regarding the impact from leaving unemployment

into a job, and from the labour force to being economically inactive, a new pattern appears. In the Southern European countries the coefficients are significant and negative reflecting that having experienced unemployment and, probably in some cases, having experienced being excluded from the labour force result cet. par. in a lower level of satisfaction.

Looking at the impact from demographic variables, the most clear result in these six countries is the dominance of a positive impact on the level of well-being from being 60+. Regarding the gender dummy we find, combining with Table 2, that women tend to have a lower level of well-being in all the Southern European countries.

The education variables are mostly significantly positive, with the Netherlands as an exception. Finally, a significant income "acceleration" effect is found in the Southern European countries, where the coefficient is insignificant to the relative income performance term.

Next, we look at the results in the multinomial probit analyses of the change in well-being reported in the two last columns of the table for each country. Changes in health have no impact on changes in satisfaction in Belgium and Finland. In Spain, Portugal and the Netherlands improved health reduces the probability of a decline in satisfaction, while it increases the probability of an increase in satisfaction in Spain and Greece. The only example of significance for deltacohab is found in Belgium where entry to marriage or cohabitation has a significantly positive impact on the probability of an increase in well-being.

A transition from a job to unemployment has a consistent significant impact in all six countries increasing the probability of a decline in well-being. The reverse transition has a corresponding significant and positive impact on the probability of an increase in satisfaction. Finally, looking at the impact from an exit to being economically inactive, the results are more mixed. Except for Greece, this transition results in a higher probability of an increase in satisfaction. At the same time, however, it also increases the probability of a decline in satisfaction. A possible interpretation is to refer to the fact that exits from the labour force for some people are voluntary and thus related to the realisation of a higher level of utility, while for other pople it might be the end result of a process of marginalization and exclusion resulting in a forced decline in utility.

Table 3

Belgium – probit for equal scale (pk001={1,2,3} and pk001={4,5,6}) and multinomial probit for change in equal scale with change-in-change covariate (base=0)

	Probit	Probit	Probit	Probit	Multinomial probit (base 0)	
					chgsatspliteq=-1	chgsatpliteq=1
chgmeaneqiinc	0.137*	0.131	0.0467	0.0459	-0.0869	-0.0552
	(0.079)	(0.082)	(0.10)	(0.090)	(0.12)	(0.096)
deltahealth	0.0264*	0.0286*	0.0226	0.0261	-0.0381	-0.00342
	(0.015)	(0.015)	(0.016)	(0.016)	(0.026)	(0.024)
deltacohab	0.144	0.111	0.148	0.122	-0.131	0.525**
	(0.14)	(0.14)	(0.15)	(0.15)	(0.23)	(0.22)
eu	-1.853***	-1.761***	-1.958***	-1.872***	1.394***	-0.176
	(0.28)	(0.29)	(0.30)	(0.31)	(0.35)	(0.60)
ue	-0.0919	0.00400	-0.171	-0.0694	1.338***	2.188***
	(0.21)	(0.21)	(0.22)	(0.22)	(0.33)	(0.28)
ln	-0.278*	-0.237	-0.293*	-0.261*	0.176	0.492**
	(0.15)	(0.15)	(0.15)	(0.15)	(0.26)	(0.23)
lagyr25til59		-0.225***		-0.234***		
		(0.085)		(0.091)		
lagyr60plus		0.270***		0.250**		
		(0.10)		(0.11)		
female		-0.103**		-0.0758		
		(0.048)		(0.050)		
childunder12		0.0412		0.0194		
		(0.056)		(0.058)		
secondeduc		0.0968		0.0875		
		(0.059)		(0.061)		
thirdeduc		0.414***		0.411***		
		(0.064)		(0.065)		
chg2meaneqiinc			0.0686	0.0733		
			(0.067)	(0.065)		
Constant	0.950***	0.938***	0.965***	0.956***	-1.792***	-1.733***
	(0.024)	(0.094)	(0.025)	(0.099)	(0.041)	(0.040)
Observations	4012	3947	3753	3753	3926	3926

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Spain – probit for equal scale (pk001={1,2,3} and pk001={4,5,6}) and multinomial probit for change in equal scale with change-in-change covariate (base=0)

	Probit	Probit	Probit	Probit	Multinomial probit (base 0)	
					chgsatspliteq=-1	chgsatspliteq=1
chgmeaneqiinc	0.0547***	0.0501**	0.123***	0.101**	-0.0384	0.000891
	(0.020)	(0.021)	(0.042)	(0.043)	(0.032)	(0.031)
deltahealth	0.0446***	0.0423***	0.0469***	0.0449***	-0.0466***	0.0262**
	(0.0072)	(0.0073)	(0.0075)	(0.0077)	(0.011)	(0.011)
deltacohab	0.104	0.0707	0.0886	0.0500	-0.109	0.0861
	(0.086)	(0.087)	(0.095)	(0.095)	(0.13)	(0.14)
eu	-1.196***	-1.179***	-1.232***	-1.224***	1.142***	-0.0672
	(0.096)	(0.097)	(0.10)	(0.10)	(0.13)	(0.18)
ue	-0.289***	-0.274***	-0.299***	-0.286***	-0.0573	1.160***
	(0.074)	(0.075)	(0.080)	(0.081)	(0.14)	(0.10)
ln	-0.376***	-0.324***	-0.386***	-0.336***	0.321***	0.496***
	(0.064)	(0.065)	(0.067)	(0.068)	(0.10)	(0.099)
lagyr25til59		-0.00148		-0.00454		
		(0.040)		(0.042)		
lagyr60plus		0.205***		0.206***		
		(0.047)		(0.049)		
female		-0.174***		-0.180***		
		(0.026)		(0.027)		
childunder12		0.0535*		0.0361		
		(0.032)		(0.034)		
secondeduc		0.273***		0.275***		
		(0.038)		(0.040)		
thirdeduc		0.378***		0.379***		
		(0.035)		(0.037)		
chg2meaneqiinc			-0.0629**	-0.0478		
			(0.028)	(0.029)		
Constant	0.545***	0.450***	0.550***	0.463***	-1.167***	-1.239***
	(0.013)	(0.043)	(0.014)	(0.045)	(0.021)	(0.022)
Observations	10972	10812	10093	9970	10918	10918

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Finland – probit for equal scale (pk001={1,2,3} and pk001={4,5,6}) and multinomial probit for change in equal scale with change-in-change covariate (base=0)

	Probit	Probit	Probit	Probit	Multinomial probit (base 0)	
					chgsatspliteq=-1	chgsatspliteq=1
chgmeaneqiinc	1.603*	1.862**	2.693	2.917*	-3.504**	-0.837
	(0.90)	(0.90)	(1.68)	(1.69)	(1.45)	(1.45)
deltahealth	0.0246	0.0265*	0.0208	0.0251	-0.0243	-0.00342
	(0.015)	(0.016)	(0.016)	(0.016)	(0.025)	(0.025)
deltacohab	0.215	0.222	0.198	0.214	0.0502	0.227
	(0.16)	(0.16)	(0.18)	(0.18)	(0.27)	(0.26)
eu	-1.091***	-1.044***	-1.090***	-1.038***	1.720***	0.385
	(0.14)	(0.14)	(0.15)	(0.15)	(0.20)	(0.30)
ue	-0.238	-0.182	-0.242	-0.181	0.278	2.016***
	(0.15)	(0.15)	(0.16)	(0.16)	(0.31)	(0.19)
ln	-0.0392	-0.0181	0.121	0.153	0.306*	0.821***
	(0.12)	(0.12)	(0.14)	(0.14)	(0.18)	(0.15)
lagyr25til59		0.0626		0.0521		
		(0.072)		(0.080)		
lagyr60plus		0.407***		0.392***		
		(0.095)		(0.10)		
female		0.0774		0.0790		
		(0.048)		(0.050)		
childunder12		0.0266		0.0159		
		(0.057)		(0.060)		
secondeduc		0.0639		0.0483		
		(0.065)		(0.068)		
thirdeduc		0.145**		0.146**		
		(0.070)		(0.073)		
chg2meaneqiinc			-0.631	-0.726		
			(0.97)	(0.99)		
Constant	1.128***	0.894***	1.132***	0.911***	-1.929***	-1.987***
	(0.025)	(0.088)	(0.026)	(0.096)	(0.040)	(0.041)
Observations	4533	4475	4061	4061	4519	4519

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Greece – probit for equal scale (pk001={1,2,3} and pk001={4,5,6}) and multinomial probit for change in equal scale with change-in-change covariate (base=0)

	Probit	Probit	Probit	Probit	Multinomial probit (base 0)	
					chgsatspliteq=-1	chgsatspliteq=1
chgmeaneqiinc	0.0440***	0.0436***	0.162***	0.148***	-0.0213	0.0298
	(0.014)	(0.014)	(0.026)	(0.027)	(0.025)	(0.023)
deltahealth	0.0263**	0.0230**	0.0304***	0.0278**	-0.00125	0.0374**
	(0.011)	(0.011)	(0.011)	(0.011)	(0.019)	(0.017)
deltacohab	-0.00806	-0.0136	0.00673	-0.0174	-0.353	-0.106
	(0.13)	(0.13)	(0.14)	(0.15)	(0.26)	(0.21)
eu	-1.047***	-1.076***	-0.993***	-1.059***	0.611***	-0.382
	(0.15)	(0.16)	(0.16)	(0.17)	(0.20)	(0.26)
ue	-0.212*	-0.210*	-0.262**	-0.291**	-0.274	0.839***
	(0.12)	(0.12)	(0.13)	(0.13)	(0.28)	(0.17)
ln	-0.259***	-0.237***	-0.263***	-0.235**	-0.00998	0.276*
	(0.089)	(0.091)	(0.096)	(0.098)	(0.17)	(0.14)
lagyr25til59		0.262***		0.265***		
		(0.050)		(0.054)		
lagyr60plus		0.392***		0.390***		
		(0.057)		(0.060)		
female		-0.0985***		-0.0938***		
		(0.029)		(0.030)		
childunder12		0.0268		0.0160		
		(0.036)		(0.037)		
secondeduc		0.510***		0.515***		
		(0.036)		(0.038)		
thirdeduc		1.051***		1.102***		
		(0.051)		(0.055)		
chg2meaneqiinc			-0.083***	-0.078***		
			(0.015)	(0.015)		
Constant	0.127***	-0.375***	0.0989***	-0.401***	-1.585***	-1.322***
	(0.014)	(0.055)	(0.015)	(0.059)	(0.027)	(0.024)
Observations	8293	8168	7455	7455	8290	8290

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Netherlands – probit for equal scale (pk001={1,2,3} and pk001={4,5,6}) and multinomial probit for change in equal scale with change-in-change covariate (base=0)

	Probit	Probit	Probit	Probit	Multinomial probit (base 0)	
					chgsatspliteq=-1	chgsatsplit=1
chgmeaneqiinc	-1.964	-1.917	-2.301	-2.054	4.158	3.570
	(1.66)	(1.68)	(3.25)	(3.25)	(2.69)	(2.63)
deltahealth	0.0814***	0.0819***	0.0829***	0.0836***	-0.116***	-0.0228
	(0.014)	(0.014)	(0.015)	(0.015)	(0.022)	(0.021)
deltacohab	0.184	0.171	0.182	0.187	-0.147	0.146
	(0.11)	(0.11)	(0.14)	(0.14)	(0.17)	(0.16)
eu	-0.585***	-0.569***	-0.563**	-0.545**	1.071***	0.519
	(0.20)	(0.20)	(0.22)	(0.22)	(0.28)	(0.35)
ue	0.263	0.288	0.306	0.345	0.344	1.546***
	(0.24)	(0.24)	(0.27)	(0.27)	(0.32)	(0.21)
ln	-0.0856	-0.0661	-0.0997	-0.0725	0.0125	0.321**
	(0.096)	(0.097)	(0.10)	(0.11)	(0.16)	(0.14)
lagyr25til59		-0.130		-0.0376		
		(0.081)		(0.090)		
lagyr60plus		-0.0143		0.0740		
		(0.089)		(0.098)		
female		-0.0944**		-0.117***		
		(0.041)		(0.045)		
childunder12		0.0256		0.0418		
		(0.049)		(0.054)		
secondeduc		-0.0734				
		(0.38)				
thirdeduc		0.0492		0.150		
		(0.17)		(0.36)		
chg2meaneqiinc			0.211	0.0769		
			(1.70)	(1.70)		
Constant	1.323***	1.464***	1.343***	1.403***	-2.086***	-2.156***
	(0.021)	(0.080)	(0.023)	(0.089)	(0.032)	(0.034)
Observations	7748	7628	6594	6567	7745	7745

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Portugal – probit for equal scale (pk001={1,2,3} and pk001={4,5,6}) and multinomial probit for change in equal scale with change-in-change covariate (base=0)

	Probit	Probit	Probit	Probit	Multinomial probit (base 0)	
					chgsatspliteq=-1	chgsatspliteq=1
chgmeaneqiinc	0.0757**	0.0664**	0.277***	0.199***	-0.00477	-0.0167
	(0.031)	(0.033)	(0.064)	(0.068)	(0.055)	(0.055)
deltahealth	0.0536***	0.0381***	0.0565***	0.0413***	-0.0535***	0.0215
	(0.0097)	(0.0099)	(0.0100)	(0.010)	(0.017)	(0.017)
deltacohab	-0.0442	-0.129*	-0.0334	-0.140*	0.140	0.0782
	(0.070)	(0.074)	(0.075)	(0.077)	(0.13)	(0.13)
eu	-1.835***	-1.978***	-1.796***	-1.956***	1.720***	-0.175
	(0.17)	(0.17)	(0.17)	(0.17)	(0.18)	(0.33)
ue	-0.308***	-0.433***	-0.295**	-0.442***	-0.240	1.682***
	(0.11)	(0.12)	(0.12)	(0.12)	(0.32)	(0.16)
ln	-0.524***	-0.456***	-0.483***	-0.416***	0.852***	0.481***
	(0.072)	(0.073)	(0.075)	(0.075)	(0.11)	(0.12)
lagyr25til59		0.0446		0.0398		
		(0.042)		(0.044)		
lagyr60plus		-0.229***		-0.232***		
		(0.047)		(0.049)		
female		-0.293***		-0.287***		
		(0.027)		(0.028)		
childunder12		0.0321		0.0551		
		(0.034)		(0.035)		
secondeduc		0.442***		0.433***		
		(0.048)		(0.050)		
thirdeduc		0.922***		0.928***		
		(0.072)		(0.075)		
chg2meaneqiinc			-0.149***	-0.101**		
			(0.040)	(0.042)		
Constant	0.553***	0.660***	0.549***	0.657***	-1.781***	-1.710***
	(0.014)	(0.043)	(0.014)	(0.045)	(0.025)	(0.024)
Observations	10186	9994	9433	9433	10186	10186

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

5. Summary and concluding remarks

The above analyses resulted in a number of fairly clear results regarding factors influencing both the level and the change in subjective well-being. This is the case regarding the impact from the level of income, from the family and health indicators, and from belonging to the older part of the population which clearly tend to increase satisfaction with main activity. Furthermore, we find some clear and strong effects on subjective well-being from changes in labour market status with negative impact from entering unemployment and positive effects from the reverse transition and from leaving the labour force.

The results are preliminary in the sense that they refer to one – although big – data set only, and these data are not fully utilized in the present paper where the main focus in the analysis is on a

selection of countries where individuals have been followed for two periods only. An obvious extension of the present analysis is to include more waves and more countries available in the ECHP to test for stability in the results and to extend the analysis to other cross-country data sets containing individual observations.

Some policy considerations following from the preliminary results in the paper seem to be

- Unemployment may affect well-being in different degrees in different EU countries depending on benefits and the risk of long term unemployment, but an ambitious and successful job creation policy will have positive effects on well-being in all the EU countries included in the present analysis
- Most exits from the labour force appear to be voluntary as they correlate positively with increases in satisfaction. However, a share of the exits appear to be involuntary, reflecting marginalization and/or exclusion leading to a decline in utility
- Senior citizens classified as the 60+ group are clearly the age group with the highest score on the satisfaction with main activity indicator. This, combined with the immediately above mentioned finding is a clear candidate explaining the strong resistance to pension reforms in most European countries. As such reforms in many countries are a necessity considering the demographic prospects, it seems that an obvious policy conclusion is that pension reforms, increasing the average retirement age, have to include elements like more flexibility, learning new skills and other challenges in senior work life to “compensate” for the clear age/retirement gain in subjective well-being found in the present study to be characteristic of the current setup of pension programs and labour market structures.

Appendix : Variable definitions

satspliteq	satspliteq=0 if pk001={1,2,3} and satspliteq=1 if pk001={4,5,6} and satspliteq=. if pk001={-8,-9}
deltasatspliteq	deltasatspliteq=5 if pk001=5 in wave=6 and pk001=6 in wave=7 for same pid deltasatspliteq=4 if pk001=4 in wave=6 and pk001=5 in wave=7 for same pid deltasatspliteq=3 if pk001=3 in wave=6 and pk001=4 in wave=7 for same pid deltasatspliteq=2 if pk001=2 in wave=6 and pk001=3 in wave=7 for same pid deltasatspilteq=1 if pk001=1 in wave=6 and pk001=2 in wave=7 for same pid deltasatspliteq=-1 if pk001=6 in wave=6 and pk001=5 in wave=7 for same pid deltasatspliteq=-2 if pk001=5 in wave=6 and pk001=4 in wave=7 for same pid deltasatspliteq=-3 if pk001=4 in wave=6 and pk001=3 in wave=7 for same pid deltasatspliteq=-4 if pk001=3 in wave=6 and pk001=2 in wave=7 for same pid deltasatspliteq=-5 if pk001=2 in wave=6 and pk001=1 in wave=7 for same pid deltasatspliteq=0 if pk001=1 in wave=6 and pk001=1 in wave=6 for same pid deltasatspliteq=0 if pk001=2 in wave=6 and pk001=2 in wave=6 for same pid deltasatspliteq=0 if pk001=3 in wave=6 and pk001=3 in wave=6 for same pid deltasatspliteq=0 if pk001=4 in wave=6 and pk001=4 in wave=6 for same pid deltasatspliteq=0 if pk001=5 in wave=6 and pk001=5 in wave=6 for same pid deltasatspliteq=0 if pk001=6 in wave=6 and pk001=6 in wave=6 for same pid deltasatspliteq=. otherwise
eqiinc	hi100/(hd004*1000000) where hi100 and hd004 have been corrected such that hi100={-8,-9} or hd004={-8,-9} has been set to respectively hi100=. and hd004=.
incimprove	incimprove=1 if hf015={1,2} and incimprove=0 if hf015={3,4,5}
yr25til59	yr25til59=1 if pd003>=25 & pd003<=59 and yr25til59=0 otherwise
yr60plus	yr60plus=1 if pd003>59 and yr60plus=0 otherwise
lagyr25til59	lagged value of yr25til60
lagyr60plus	lagged value of yr60plus
female	female=0 if pd004=1 and female=1 if pd004=2 and female=. otherwise
cohab	cohab=0 if pd008=2 and cohab=1 if pd008=1 and cohab=. otherwise
childunder12	childunder12=0 if hl001=2 and childunder12=1 if hl001=1 and childunder12=. otherwise
mainacti	mainacti=1 if pe001={1,2,3,4,7} and mainacti=0 if pe001={5,6,7,9,10,11,12} and mainacti=. Otherwise
secondeduc	secondeduc=1 if pt022=2 and secondeduc=0 if pt022={1,3} and secondeduc=. Otherwise
thirdeduc	thirdeduc=1 if pt022=1 and thirdeduc=0 if pt022={2,3} and thirdeduc=. otherwise
badhealth	badhealth=1 if ph001={3,4,5} and badhealth=0 if ph001={1,2} and badhealth=. otherwise
pollution	pollution=1 if ha021=1 and pollution=0 if ha021=0 and pollution=. Otherwise
crime	crime=1 if ha022=1 and crime=0 if ha022=2 and ha021=. otherwise
medkoreqiinc	medkoreqiinc=eqiinc/medianeqiinc for same pid where medianeqiinc is median of eqiinc across all pid
meankorreqiinc	meankorreqiinc=eqiinc-meaneqiinc for same pid where meaneqiinc is mean of eqiinc across all pid
chgmeaneqiinc	chgmeaneqiinc=chgeqiinc-meanchgeqiinc for same pid where chgeqiinc=eqiinc in wave=7 – eqiinc in wave=6 for same pid and meanchgeqiinc=mean of chgeqiinc across all pid
chg2meaneqiinc	chg2meaneqiinc=chgmeaneqiinc from wave=6 to wave=7 – chgmeaneqiinc from wave=5 to wave=6
meandivkorreqiinc	meandivkorreqiinc=eqiinc/meaneqiinc for same pid where meaneqiinc is mean of eqiinc across all pid
chgdivmeaneqiinc	chgdivmeaneqiinc=chgeqiinc/meanchgeqiinc where chgeqiinc and meanchgeqiinc are as defined under chgmeaneqiinc
chgdiv2meaneqiinc	chgdiv2meaneqiinc=chgdivmeaneqiinc from wave=6 to wave=7 – chgdivmeaneqiinc from wave=5 to wave=6

deltabadhealth	deltabadhealth=0 if badhealth=0 in wave=6 and badhealth=0 in wave=7 for same pid deltabadhealth=0 if badhealth=1 in wave=6 and badhealth=1 in wave=7 for same pid deltabadhealth=1 if badhealth=1 in wave=6 and badhealth=0 if wave=7 for same pid deltabadhealth=-1 if badhealth=0 in wave=6 and badhelath=1 in wave=7 for same pid deltabadhealth=. Otherwise
deltahealth	deltahealth=4 if ph001=2 in wave=6 and ph001=1 in wave=7 for same pid deltahealth=3 if ph001=3 in wave=6 and ph001=2 in wave=7 for same pid deltahealth=2 if ph001=4 in wave=6 and ph001=3 in wave=7 for same pid deltahealth=1 if ph001=5 in wave=6 and ph001=4 in wave=7 for same pid deltahealth=-1 if ph001=1 in wave=6 and ph001=2 in wave=7 for same pid deltahealth=-2 if ph001=2 in wave=6 and ph001=3 in wave=7 for same pid deltahealth=-3 if ph001=3 in wave=6 and ph001=4 in wave=7 for same pid deltahealth=-4 if ph001=4 in wave=6 and ph001=5 in wave=7 for same pid deltahealth=0 if ph001=1 in wave=6 and ph001=1 in wave=6 for same pid deltahealth=0 if ph001=2 in wave=6 and ph001=2 in wave=6 for same pid deltahealth=0 if ph001=3 in wave=6 and ph001=3 in wave=6 for same pid deltahealth=0 if ph001=4 in wave=6 and ph001=4 in wave=6 for same pid deltahealth=0 if ph001=5 in wave=6 and ph001=5 in wave=6 for same pid deltahealth=. Otherwise
deltacohab	deltacohab=0 if pd008=1 in wave=6 and pd008=1 in wave=7 for same pid deltacohab=0 if pd008=2 in wave=6 and pd008=2 in wave=7 for same pid deltacohab=1 if pd008=2 in wave=6 and pd008=1 in wave=7 for same pid deltacohab=-1 if pd008=1 in wave=6 and pd008=2 in wave=7 for same pid deltacohab=. Otherwise
ue	ue=1 if pe001=7 in wave=6 and pe001=1 in wave=7 for same pid ue=1 if pe001=7 in wave=6 and pe001=2 in wave=7 for same pid ue=1 if pe001=7 in wave=6 and pe001=3 in wave=7 for same pid ue=1 if pe001=7 in wave=6 and pe001=4 in wave=7 for same pid ue=. if pe001=. in wave=6 ue=. if pe001=. in wave=7 ue=0 otherwise
eu	eu=1 if pe001=1 in wave=6 and pe001=7 in wave=7 for same pid eu=1 if pe001=2 in wave=6 and pe001=7 in wave=7 for same pid eu=1 if pe001=3 in wave=6 and pe001=7 in wave=7 for same pid eu=1 if pe001=4 in wave=6 and pe001=7 in wave=7 for same pid eu=. if pe001=. in wave=6 eu=. if pe001=. in wave=7 eu=0 otherwise
ln	ln=1 if pe001={1,2,3,4,7} in wave=6 and pe001={5,6,8,9,10,11,12} for same pid ln=. if pe001=. in wave=6 ln=. if pe001=. in wave=7 ln=0 otherwise

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