

International Evidence on Well-being

David G. Blanchflower

Bruce V. Rauner Professor of Economics
Dartmouth College, University of Stirling, NBER, IZA and
Member of the Monetary Policy Committee
Bank of England

Email: blanchflower@dartmouth.edu and
david.blanchflower@bankofengland.co.uk
Webpage: www.dartmouth.edu/~blnchflr

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Abstract

I compare evidence on the U-index with measures of life satisfaction and happiness as well as measures of unhappiness. Happiness is higher for the more educated, for married people, for those with higher income and for whites. Happiness does rise with age in the USA but once controls are included happiness is U-shaped in age and un-trended over time in many countries. Similar results are found using self-reported unhappiness data. Happy countries and happy individuals seem to have fewer blood-pressure problems. Well-being across nations is correlated with the unemployment rate, the current inflation rate and the highest inflation rate in a person's adult life as well as GDP growth rates in poorer countries. Happiness and life satisfaction data help to forecast including migration flows. Happy people are particularly optimistic about the prospects for the economy. According to the happiness data the US ranks above France but the U-index suggests the reverse.. According to the U-index, the French spend more of their days in a more positive mood and more of their time engaged in activities that tend to yield more pleasure than do Americans. Nations have different languages and cultures, and in principle that may cause biases, perhaps large ones, in happiness surveys. At this point in research on subjective well-being, the size of any bias is not known, and there is no accepted way to correct the data, but progress is being made. Work with the U-index seems helpful in understanding more fully the nature of this bias.

As I understand it this conference is designed for a number of researchers to discuss the idea that there should be National Time Accounts (NTA). National Time Accounting as propounded by Krueger et al (2007) - henceforth KKSSS - is a set of methods for measuring, comparing and analyzing the way people spend their time, across countries, over historical time, or between groups of people within a country at a given time. These arguments build on earlier evidence presented in Kahneman and Krueger (2006). KKSSS argue that NTA should be seen as a compliment to the National Income Accounts, not a substitute. Like the National Income Accounts, KKSSS accept that NTA "is also incomplete, providing a partial measure of society's well-being". However, national time accounting, as KKSSS note, "misses people's general sense of satisfaction or fulfillment with their lives as a whole, apart from moment to moment feelings" (p.4, 2007).

KKSSS propose an index, called the U-index (for "unpleasant" or "undesirable") which is designed to measure the proportion of time an individual spends in an *unpleasant* state. The first step in computing the U-index is to determine whether an episode is unpleasant or pleasant. An episode is classified as unpleasant by KKSSS if the most intense feeling reported for that episode is a negative one -- that is, if the maximum rating on any of the negative affect dimensions is strictly greater than the maximum of rating of the positive affect dimensions. Once they have categorized episodes as unpleasant or pleasant, the U-index is defined by KKSSS as the fraction of an individual's waking time that is spent in an *unpleasant* state. The U-index can be computed for each individual (what proportion of the time is this person in an unpleasant emotional state?), and averaged over a sample of individuals. There does seem to be some differences in the paper on how the U-index is actually calculated. For example, in KKSSS's Table 5.2 the U-index is defined as where 'stressed, sad or pain exceeded happy

whereas in their Table 8.2 it is defined as the 'maximum of tense, blue and angry being strictly greater than the rating of happy'.

It turns out that the U-index is highly correlated with measures of life satisfaction and happiness as well as measures of unhappiness. Kahneman and Kruger (2006) calculated a U-index with data from a sample of 909 working women in Texas and showed that those who report less satisfaction with their lives spend a greater fraction of their time in an unpleasant state. Of the respondents who reported they were 'not at all satisfied', 49% of their time was spent in an unpleasant state, compared with 11% who said they were 'very satisfied'. The authors also found that those who score in the top third on a depression scale spent 31% of their time in an unpleasant state whereas those who score in the bottom third on the depression scale spent 13% of their time in an unpleasant state.

KKSSS also conducted a comparison between the US and France – and I understand from Alan Krueger that results from Denmark are coming shortly. KKSSS sampled 810 women in Columbus, Ohio and 820 women in Rennes, France in the Spring of 2005 and obtained information on both life satisfaction and their U-index. The American women were *twice* as likely to say they were very satisfied with their lives as are the French women (26 percent versus 13 percent). Furthermore, assigning a number from 1 to 4 indicating life satisfaction also indicated that the Americans are more satisfied, on average, and the difference is statistically significant at the .05 level. In contrast to reported life satisfaction, the U-index is 2.8 percentage points *lower* in the French sample (16%) than in the American sample (18.8%). Thus, the French, according to KKSSS appear to spend less of their time engaged in unpleasant activities (i.e., activities in which the dominant feeling is a negative one) than do the Americans in their samples. Moreover, national time-use data examined by KSSSS indicated that the French spend

relatively more of their time engaged in activities that tend to yield more pleasure than do Americans.

The U-index relates to a relatively short period of time. Hence, there are a number of things the U-index does not measure - it appears to miss more general factors likely to impact a citizen's overall well-being. Examples, by country, include the fact that young people have been rioting on the streets of Paris over the last two days (the UK Daily Telegraph headline '*Test for Sarkozy as Paris riots continue*', November 27th, 2007), the French soccer team has won the World Cup or the English team has been knocked out of Euro 2008, or that the country is at war in Iraq and Afghanistan, or there has been a terrorist attack or a hurricane or even forest fires in Malibu or floods in New Orleans? These may well be missed by the U-index while likely being picked up in happiness or life satisfaction measures which relate to a more general feeling of happiness. It remains unclear whether an increase in unemployment, inflation or inequality or a decline in growth, or a drop in the stock market or a rise in the possibility of recession the following year would raise the U-index? Does the U-index predict the outcomes of elections or migration flows or anything at all for that matter? As I will outline in more detail below, it certainly seems that these factors impact our measures of happiness and life satisfaction.

In what follows I am going to examine the extent to which subjective well-being (SWB) measures such as life satisfaction and happiness and NTA are correlated and try to identify what have we learnt from NTA that we don't already know from work on SWB. A good deal of the work I am going to report on has been done jointly with Andrew Oswald, mostly based on cross-country data especially relating to the USA and Europe. My main conclusion is that there are more similarities than there are differences in the observed patterns across individuals. For example in the US both measures suggest that there is no time trend, women

are happier than men, whites are happier than blacks and the high paid and most educated are especially happy and happiness is U-shaped in age. One area of disagreement is in the cross country rankings, based on numerous SWB estimates from a number of data sources, France consistently ranks below the USA whereas using the U-index KKSSS find it ranks above it. The same rankings are found when the question relates to a number of other factors including expectations of how the national economy will fare in the next twelve months. Which of the two do we believe? As we note in consider below, it isn't obvious that they are contradictory.

Happiness and Life satisfaction

Economists have had longstanding reservations about the reliability of interpersonal comparisons of well-being. Before presenting data on happiness and life satisfaction to the many sceptical economists who don't believe you can or even should *measure* well-being – although fewer these days - I always explain that the data have been validated by researchers in other disciplines. I tell them that the answers to happiness and life satisfaction questions are apparently well correlated with a number of important factors.

1. Objective characteristics such as unemployment.
2. Assessments of the person's happiness by friends and family members.
3. Assessments of the person's happiness by his or her spouse.
4. Heart rate and blood-pressure measures of response to stress.
5. The risk of coronary heart disease
6. Duration of authentic or so-called Duchenne smiles (a Duchenne smile occurs when both the zygomatic major and obicularus orus facial muscles fire, and human beings identify these as 'genuine' smiles).
7. Skin-resistance measures of response to stress.
8. Electroencephelogram measures of prefrontal brain activity.

It would be interesting to know the extent to which these factors are correlated with KKSSS's U-index.

Micro-patterns in the happiness and life satisfaction data

Happiness and life satisfaction data are easy to obtain at the macro level as the data are downloadable from the World Database of Happiness for over 100 countries. Most surveys now use a common format for the questions. The micro data on happiness are easily obtainable from most data archives including ICPSR for the GSS, the Data Archive at the University of Essex and ZACAT in Germany for the *Eurobarometers*, *ISSP*, *European Social Survey*, *BHPS*, *GSOEP*, *European Quality of Life Survey*, *European Social Surveys* etc.. Happiness data are now available from the *Latinobarometers* and the *Asianbarometers* (Blanchflower and Oswald, 2007). Many of the data series extend back to the early 1970s.

Economists like running regressions, so by now the standard econometric approach taken by economists is to use micro data on happiness and/or life satisfaction to estimate an ordered logit or an OLS with the coding such that the higher the number the more satisfied an individual is (e.g. Blanchflower and Oswald, 2004). Generally, it makes little or no difference if you use an OLS or an ordered logit. The results are similar – but not identical – for happiness and life satisfaction. The main, *ceteris paribus*, findings from happiness and life satisfaction equations across countries and time are as follows.

Well-being is higher among:

Women
Married people
The highly educated
Active involvement in religion
The healthy
Those with high income
The young and the old – U-shaped in age
The self-employed
People with low blood pressure

The sexually active and especially those who have sex at least once a week
Those with one sex partner
People who visit art-galleries and public libraries

Well-being is lower among:

Newly divorced and separated people
Adults in their mid to late 40s
The unemployed
Immigrants and minorities
Those in poor health
Commuters
People with high blood pressure
The less educated
The poor
The sexually inactive

Recent findings from such statistical happiness research include the following:

- (i) For a person, money does buy a reasonable amount of happiness. But it is useful to keep this in perspective. Very loosely, for the typical individual, a doubling of salary makes a lot less difference than life events like marriage.
- (ii) For a nation, things are different. Whole countries—at least in the West where almost all the research has been done—do not seem to get happier as they get richer.
- (iii) Happiness is U-shaped in age. Women report higher well-being than men. Two of the biggest negatives in life are unemployment and divorce. Education is associated with high reported levels of happiness even after controlling for income.
- (iv) The structure of a happiness equation has the same general form in each industrialized country (and possibly in developing nations, though only a small amount of evidence has so far been collected). In other words, the broad statistical patterns look the same in France, Britain and the United States.
- (v) There is some evidence that the same is true in panels of people (that is, in longitudinal data). Particularly useful evidence comes from looking at windfalls, like lottery wins.

(vi) There is adaptation. Good and bad life events wear off—at least partially—as people get used to them.

(vii) Relative things matter a great deal. First, in experiments, people care about how they are treated compared to those who are like them, and in the laboratory will even pay to hurt others to restore what they see as fairness. Second, in large statistical studies, reported well-being depends on a person's wage relative to an average or 'comparison' wage (Luttmer, 2005). Third, wage inequality depresses reported happiness in a region or nation (controlling for many variables), but the effect is not large (Alesina et al, 2004). Some of these patterns are visible in raw data alone. For example, Di Tella et al. (2003) examine the mean life-satisfaction and happiness scores on hundreds of thousands of randomly sampled Europeans and Americans from the 1970s to the 1990s. Approximately 30 per cent of people describe themselves as very satisfied or very happy. Strong correlations with income, marriage and unemployment are noticeable.

For most major countries, however, there seems to be little evidence that despite rising affluence, happiness or life satisfaction have trended up over time. That is true in the raw happiness data for the USA, as we showed in Blanchflower and Oswald (2004). For example, in 2006, 13.1% of respondents said they were not too happy, 56.1% pretty happy and 30.8% very happy. In 1972, the first year happiness data are available the numbers were 16.5%, 53.2% and 30.3% respectively. As can be seen from Figure 1, average happiness levels for the US are flat, while real GDP per capita has risen. Well-being is flat through time in most other rich countries too, as can be seen from Figure 2a for France, and the UK and in Figure 2b for Belgium, Ireland and the Netherlands. This is confirmed by Guven (2007), who found that individual happiness in Germany and the Netherlands has been persistent over time. Note that happiness levels are generally high in Denmark and low in Italy and France. There is some sign of an upward trend

in Italy and to a lesser extent in Denmark and France, It is also apparent from Table 7.3 of KKSSS that their U-index based on time in various activities each year is also flat over time.

	1965-66	1975-76	1985	1992-94	2003	2005
All	20.1%	19.5%	19.5%	20.0%	19.3%	19.6%
Men	20.9	20.4	20.1	20.2	19.6	19.9
Women	19.4	18.7	19.0	19.8	19.2	19.4

There is some consistent evidence though that the wellbeing of the young (<30) has risen over time in both the USA and Europe (Blanchflower and Oswald, 2000). The rise is mostly among the unmarried. We found that this upward trend is not explained by changing education or work, falling discrimination or rise of youth-oriented consumer goods.

Alongside this there is new evidence that *high frequency* happiness data yields information about preferences. Kimball et al (2006), for example, showed that happiness dipped significantly the first week of September 2006, after the seriousness of the damage done by Hurricane Katrina started to become apparent. The dip in happiness lasted two or three weeks and was especially apparent in the South Central region, closest to the devastated area.

The first column of Table 1 is taken from KKSSS and reports their U-index, which should be thought of as the inverse of a subjective wellbeing or happiness index. The higher the U-index the more unhappy the person is. There is little difference by gender; blacks are especially unhappy; the poor are unhappy as are the least educated. Unhappiness declines with age and is particularly low for the married and high for the widowed. How do these findings compare with those found using happiness and life satisfaction data? Column two presents the proportion of people in the USA from the *General Social Surveys* of 2000-2006 who say they are very happy (from a 1-3 scale) while in column 3 the proportion of Europeans from the 2000-2006 *Eurobarometers* saying they were very satisfied and in the final column for the 2005 2006

Latinobarometers who say they are very satisfied, both on a 1-4 scale, are reported.¹ Here a larger proportion means happier and is the inverse of the U-index. Interestingly the results are very similar in all four columns. Happiness is higher for the more educated, for married people, for those with higher income and for whites. Happiness does rise with age in the USA but once controls are included happiness is U-shaped in age (Blanchflower and Oswald, 2007b). It is U-shaped in age in both the European and Latin American countries even in the raw data and when controls are included (Blanchflower and Oswald, 2007b). This result is confirmed by KKSSS in their Table 7.4 where unhappiness seems to follow an inverted U-shape.² The patterns across individuals are essentially the same then from SWB and NTA in the USA, Latin America and Europe.

In section 8 of their paper KKSSS do some international comparisons of SWB in two “representative” cities, one in France and the other in the United States, and ask whether the standard measure of life satisfaction and the NTA yield the same conclusion concerning relative well-being. Specifically, they designed a survey to compare overall life satisfaction, time use, and recalled affective experience during episodes of the day for random samples of women in Rennes in France and Columbus, Ohio in the United States. These cities were selected because they argued that they represented “middle America” and “middle France”. KKSSS also

¹ The countries covered in these *Eurobarometers* are Austria; Belgium; Bulgaria; Croatia; Cyprus; Czech Republic; Denmark; Estonia; Finland; France; Germany; Greece; Hungary; Ireland; Italy; Latvia; Lithuania; Luxembourg; Malta; Netherlands; Norway; Poland; Portugal; Romania; Slovakia; Slovenia; Spain; Sweden; Turkey and the UK. The *Latinobarometer* covers Argentina; Bolivia; Brazil; Colombia; Costa Rica; Chile; Dominican Republic; Ecuador; El Salvador; Guatemala; Honduras; Mexico; Nicaragua; Panama; Paraguay; Peru; Uruguay and Venezuela.

² Blanchflower and Oswald (2007b) find that a robust U-shape in age in happiness/life satisfaction is found in seventy-two countries - Albania; Argentina; Australia; Azerbaijan; Belarus; Belgium; Bosnia; Brazil; Brunei; Bulgaria; Cambodia; Canada; Chile; China; Colombia; Costa Rica; Croatia; Czech Republic; Denmark; Dominican Republic; Ecuador; El Salvador; Estonia; Finland; France; Germany; Greece; Honduras; Hungary; Iceland; Iraq; Ireland; Israel; Italy; Japan; Kyrgyzstan; Laos; Latvia; Lithuania; Luxembourg; Macedonia; Malta; Mexico; Myanmar; Netherlands; Nicaragua; Nigeria; Norway; Paraguay; Peru; Philippines; Poland; Portugal; Puerto Rico; Romania; Russia; Serbia; Singapore; Slovakia; South Africa; South Korea; Spain; Sweden; Switzerland; Tanzania; Turkey; United Kingdom; Ukraine; Uruguay; USA; Uzbekistan and Zimbabwe.

presented results using time allocation derived from national samples in the United States and France to extend their analysis beyond these two cities. The city sample consisted of 810 women in Columbus, Ohio and 820 women in Rennes, France. Respondents were invited to participate based on random-digit dialing in the Spring of 2005 and were paid approximately \$75 for their participation in both countries. The age range spanned 18 to 68, and all participants spoke the country's dominant language at home. The Columbus sample was older (median age of 44 versus 39), more likely to be employed (75 percent versus 67 percent) and better educated (average of 15.2 years of schooling years versus 14.0) than the Rennes sample. In addition, the Rennes sample was more likely to be currently enrolled in school (16 percent versus 10 percent). The life satisfaction question was taken from the World Values Survey.

The distribution of reported life satisfaction in Columbus, OH and Rennes, France for women found by KKSSS is presented in the first two columns of part A of Table 2a using the 4-step life satisfaction scale. Life satisfaction is based on the question, "Taking all things together, how satisfied are you with your life as a whole these days - not at all satisfied, not very, fairly and very satisfied?" KKSSS found that American women reported higher levels of life satisfaction than the French did, whether the proportion who said they were very satisfied or the overall score is used. Yet they also found that, on average, the French spent their days in a more positive mood. Moreover, the national time-use data they used also indicated that the French spend relatively more of their time engaged in activities that tend to yield more pleasure than do Americans. Their results, they argue, "suggest that considerable caution is required in comparing standard life satisfaction data across populations with different cultures". In particular, the Americans seem to be more emphatic when reporting their well-being. The U-index KKSSS suggests, "apparently overcomes this inclination".

It is clearly problematic to compare one country's happiness answers to those of another country. Nations have different languages and cultures, and in principle that may cause biases, perhaps large ones, in happiness surveys. At this point in research on subjective well-being, the size of any bias is not known, and there is no accepted way to correct the data, although the literature has made some progress in exploring this issue (for instance, by looking inside a nation like Switzerland at sub-groups with different languages). In the long run, research into ways to difference out country fixed-effects will no doubt be done and the work of KKSSS in this regard is obviously important. The strong well-being performance in some happiness surveys such as Mexico and Brazil, therefore, may or may not ultimately be viewed as completely accurate. In Blanchflower and Oswald (2005), one check was done by comparing happiness in the English speaking nations of Great Britain, Ireland, New Zealand, Northern Ireland and the United States. The main attraction is that this automatically avoids translation problems. Moreover, this smaller group of nations has the advantage that they are likely to be more similar in culture and philosophical outlook, and that in turn may reduce other forms of bias in people's answers.

However, it does appear that there is considerable stability in cross-country rankings of life satisfaction in English speaking countries (Blanchflower and Oswald, (2005, 2006); Leigh and Wolfers, (2006)). As I will show in more detail below there is also a great deal of stability in the rankings of European countries across a number of surveys including the *Eurobarometers* (1973-2006), *European Quality of Life Survey* (2003) and the *European Social Survey* (2002). Further, it seems that there is evidence from the *World Values Survey* and the *International Social Survey Programme* (2002) supporting a happiness ranking where the US is ranked above France as implied in KKSSS's life satisfaction data rather than below it as implied by their U-index. In fact I am unable to find any data file where the ranking reverses as occurs with the U-

index. The evidence is essentially the same whether we look at happiness, life satisfaction or health, family life or conversely, a variety of measures of unhappiness including measures of high blood pressure, stress, lack of sleep and being 'down and depressed'.

Where feasible we present data comparing the US and France but there are only a few data files that include both countries so we make use of data from a number of European data files that allow a direct comparison with the UK and Denmark that will be included in KKSSS's analysis shortly. In most of what follows the UK ranks above France: Denmark is nearly always top of the happiness rankings in Europe, especially when life satisfaction is used. If we refer to Figures 2a and 2b which are based on *Eurobarometer* data, Denmark ranks above the UK which itself ranks above France, in every year of data we have available. Indeed, based simply on life satisfaction averages France usually ranks below the large majority of the EU15. For example, in the latest Eurobarometer available, #65.2 for March-May 2006, France ranked fourteenth out of thirty countries.³ Controlling for a variety of characteristics over a long run of thirty years, France ranked seventeenth out of thirty.⁴

Columns 3-5 of part A of Table 2a report results using the most recent subset of the data from the *Eurobarometers* for 2000-2006 which shows that France ranks third behind Denmark and the UK. Part B of Table 2a presents data on women using the World Values Survey on a 10

³ Average life satisfaction scores were Denmark (3.61); Sweden (3.39); Luxembourg (3.39); Netherlands (3.36); Ireland (3.28); Finland (3.23); UK (3.19); Belgium (3.19); Cyprus (3.12); Slovenia (3.10); Spain (3.08); Austria (3.08); Turkish Cyprus (3.02); France (3.00); Malta (2.98); West Germany (2.95); Czech Republic (2.89); Italy (2.86); Turkey (2.85); Poland (2.79); Croatia (2.78); Estonia (2.72); East Germany (2.72); Greece (2.67); Slovakia (2.66); Lithuania (2.58); Latvia (2.56); Hungary (2.47); Portugal (2.44); Romania (2.31) and Bulgaria (1.97).

⁴ When an ordered logit is run using these Eurobarometer data from 1973-2006 pooled across all member countries plus Candidate Countries Croatia, Norway and Turkey with a standard set of controls as in Table 8 column 5, the rankings are as follows with rank in parentheses Denmark (1); Netherlands (2); Norway (3); Sweden (4); Luxembourg (5); Ireland (6); UK (7); Finland (8); Belgium (9); Austria (10); Cyprus (11); Slovenia (12); Malta (13); Spain (14); Germany (15); Turkey (16); France (17); Czech Republic (18); Italy (19); Croatia (20); Poland (21); Portugal (22); Estonia (23); Greece (24); Slovakia (25); Latvia (26); Lithuania (27); Hungary (28); Romania (29); Bulgaria (30);

point life satisfaction scale and replicates that ranking. Part C of the table uses data for men and women combined from the World Database of Happiness and which includes all four countries. Once again France ranks bottom, with Denmark second and the UK third with the USA at the top.

In the final part of Table 2a I present some macro-economic data on GDP per capita, the Gini coefficient and the most recent unemployment rate (Source; Labour Market Statistics First Release, ONS, November, 2007). In comparison with France the USA has a) a lower unemployment rate, b) higher GDP per capita c) higher Gini coefficient. France has especially high rates of long-term unemployment and youth unemployment. Denmark has an especially low unemployment rate and low Gini coefficient.

The 2007 Human Development Indicators also place the USA above France. The 2006 rankings from the 2007/2008 Human Development Report from the UN on the HDI are USA (8th); Denmark (15th); France (16th) and UK (18th). Table 2b reports on suicide data provided by the World Health Organization. Despite the well known difficulty of making suicide rates comparable across countries, it appears that the rates in France for both men and women are well above that for the USA. This ranking is more consistent with SWB data rankings than it is with rankings based on NTA.

Happiness from a further source, the *International Social Survey Programme* (ISSP), which also contains data from the two countries, is also supportive of the fact that happiness in the USA is *higher* than it is in France. Data on the two countries are available in the 1998, 2001 and 2002 sweeps. In the first two sweeps happiness data is available on a four point scale in response to the question 'how happy are you wit your life in general – not at all happy; not very happy, fairly happy and very happy'. Responses are as follows

	not at all	not very	fairly	very	score	N
2001 USA	1%	7%	51%	41%	3.3%	1129
1998 USA	2%	9%	52%	37%	3.2%	1272
2001 France	1%	9%	62%	27%	3.2%	1330
1998 France	3%	20%	64%	13%	2.9%	1082

The overall score for the French increased between 1998 and 2001. In the 2002 ISSP responses were provided on a seven point scale and the US score is once again considerably higher than for the French for both men and women. As can be seen below the average score across respondents in the USA was higher for both men and women, however, the proportion very unhappy – completely, very or fairly – was higher. For men in the USA 4.3% in this category compared with 3.1% in France while for women the numbers were 4.2% and 3.6% respectively.

USA

	<i>Female</i>	<i>Male</i>	<i>All</i>
Completely unhappy	0.2	0.0	0.1
Very unhappy	1.5	1.2	1.4
Fairly unhappy	2.5	3.1	2.8
Neither	5.4	6.8	6.0
Fairly happy	31.9	36.3	33.7
Very happy	45.7	41.6	44.0
Completely happy	13.0	11.1	12.2
Score	5.56	5.47	5.52
N	672	488	1,160

France

	<i>Female</i>	<i>Male</i>	<i>All</i>
Completely unhappy	0.1	0.2	0.1
Very unhappy	0.3	0.5	0.3
Fairly unhappy	3.2	2.4	3.0
Neither	13.4	10.9	12.6
Fairly happy	48.8	49.1	48.9
Very happy	23.6	25.0	24.1
Completely happy	10.7	12.0	11.1
Score	5.24	5.31	5.26
N	1,216	617	1,833

We now turn to the econometric evidence where we are able to hold constant a number of factors including labor market and marital status, age, gender and schooling. The rankings remain essentially unchanged.

Econometric evidence on the micro-determinants of happiness

Rank orderings of the United States and France are consistent whether we examine happiness, life satisfaction or self-assessed health status, or other variables relating to the family, no matter what the data file or year we examine. Table 3a and 3b explores differences in happiness between the United States and France using the ISSP 1998, 2001 and 2002 data described above.⁵ In all three years of data the USA ranks above France, although there is some variation in the rankings across other countries. For example, the UK is above the USA in 1998 and 2001 but below it in 2002 and above Denmark in all three years while Denmark is below France in 2001. In most other data files we examine below Denmark ranks top in Europe, especially on life satisfaction. Columns 3 and 4 provide estimates of ordered logits estimating how satisfied the individual is with their family life. The idea here is to ensure the rankings are not driven by different interpretations of the word 'happy', although still potentially impacted by the reticence of the French to be emphatic when reporting their well-being. Rankings are similar to those based on happiness, with Americans more satisfied than the French.

KKSSS were unable to interview respondents on vacation and noted that the French women in their survey take 21 days more vacation than those in the US. They argued that 'accounting for vacations would almost certainly lower the U-index in France relative to that in the US. This isn't obvious if people in the US value vacation time highly. It does seem that people in the USA value time with their families very highly. Interestingly, when individuals in the ISSP are asked whether they wished they could spend more time with their families, more

⁵ The exact question asked is Q.17. 'If you were to consider your life in general, how happy or unhappy would you say you are, on the whole?' – 1=completely happy, 2=very happy, 3=fairly happy, 4=neither happy nor unhappy, 5=fairly unhappy, 6=very unhappy and 7=completely unhappy.

than half of respondents reported they would like to spend 'much more time', compared with a third in France and the UK and a fifth in Denmark (Table 4).

It is appropriate to explore further the ranking by country using the SWB measures from other data files to see if the rankings are consistent and this is what is done in Tables 5-7. Table 5 uses data from eighty two countries from the four sweeps of the *World Values Surveys* of 1981-2004 on both life satisfaction and happiness. Ordered logits are estimated in columns 1 and 2 with the dependent variable life satisfaction with responses scored on a scale of 1-10 where 1 is least satisfied and 10 most satisfied. The sample size is just over a quarter of a million observations. The first column only includes 19 year dummies and country dummies for France, Denmark, the UK and the USA with all other countries set as the omitted category for simplicity. Column 2 adds controls for marital status and labor market status. In both columns the country ranking remains as follows - France, UK, USA and Denmark. In columns 3 and 4 the dependent variable is a 4-step happiness variable and the rankings are a little different - France, USA, UK and Denmark.

Table 6 uses data from another source, the *European Quality of Life Study* of 2003 (n=26,000), which obviously excludes the US, and follows a similar form but this time separate results are reported on a 1-step scale for life satisfaction, happiness as well as their assessment of their overall health – on a five point scale: poor, fair, good, very good and excellent. In all cases the rankings are France, UK and with Denmark highest ranked both with and without controls.

Table 7 examines data from the *2002 European Social Survey* (ESS) across 20 EU countries plus Israel and Switzerland. Data are provided in columns 1-3 on life satisfaction, happiness and health. The rankings are very similar to those reported in Table 6 – France then the UK then Denmark. The final three columns report on more general attitudes from the ESS

that are likely missed by KKSSS in their U-index measure – they relate to more general views of the economy.⁶ In columns 4-6 respectively, the respondents report on their views on the economy, government and democracy. In all three cases the ranking are the same as found in the first three columns – France then the UK then Denmark. Identical rankings to this are found in Table 8 which uses over three quarters of a million observations from the *Eurobarometers* on life satisfaction. The rank ordering is France, UK and Denmark for the period 1975-2006 as well as for *all* sub-periods. The rankings were also the same as this when thirty separate equations were run with the same controls in every year individually (results not reported).

Econometric evidence on micro measures of unhappiness

The question then is whether the pattern of results we have seen using happiness, life satisfaction and health are repeated when we make use of self-reported data on unhappiness including high blood pressure, being under strain, being unable to sleep, being tired, under stress etc.. It turns out that the results mostly go through. Table 9 uses data from two individual Eurobarometers - #56.1 for 2001 in columns 1-5 and a very recent one, #64.4 for December 2005-January 2006. Column 1 of Table 9 reports an ordered logit estimating whether an individual has high blood pressure from Blanchflower and Oswald (2007a) who showed that self-reported *high blood pressure* across individuals and countries is negatively correlated with self-reported happiness. Denmark ranks lowest on blood pressure and France highest. More recently Mojon-Azzi and Sousa-Poza (2007) show that even with more objective measures of hypertension a negative relationship between high blood pressure problems and life satisfaction

⁶ The questions were a) Taking all things together, how happy would you say you are - 0 (extremely unhappy) to 10 (extremely happy)? b) All things considered, how satisfied are you with your life as a whole nowadays - where 0 means extremely dissatisfied and 10 means extremely satisfied? c) How is your health in general? Would you say it is very bad, bad, fair, good or very good? d) On the whole how satisfied are you with the present state of the economy in [country]? e) Now thinking about the [country] government, b) how satisfied are you with the way it is doing its job? f) And on the whole, how satisfied are you with the way democracy works in [country]? Responses for d)-f) were provided on a scale from 0 (extremely dissatisfied) to 10 (extremely satisfied).

can be observed.⁷ Happy countries seem to have fewer blood-pressure problems. This has two implications. First, it suggests that there may be a case to take seriously the subjective ‘happiness’ measurements made across the world: they follow a pattern like the (inverse of) high-blood-pressure estimates. Second, in constructing new kinds of economic and social policies in the future, where well-being rather than real income is likely to be a prime concern, there are grounds for economists to study people’s blood pressure.

The second column of Table 9, which is taken from Blanchflower and Oswald (2007a, column 4, Table 5), estimates an OLS where the dependent variable is a measure of psychological distress constructed (in the spirit of the well-known General Health Questionnaire score) by amalgamating answers to the questions:

Have you recently:

1. *Lost much sleep over worry?*
2. *Felt constantly under strain?*
3. *Felt you could not overcome your difficulties?*
4. *Been feeling unhappy and depressed?*
5. *Been losing confidence in yourself?*
6. *Been thinking of yourself as a worthless person?*

To the answers to each of these six, we assigned the integers 0, 1, 2, 3 -- depending whether each was answered *not at all*, *no more than usual*, *rather more than usual*, *much more than usual*.

The numerical answers were summed, and we term the result a ‘GHQ-N6’ measure, where N stands for ‘negative’. The mental distress score denoted GHQ-N6, must for a person therefore

⁷ Mojon-Azzi and Sousa-Poza (2007) use data on whether the respondent took drugs more than once a week for high blood pressure.

lie between 0 and 18. Across Europe, the mean of the variable is 3.6 (standard deviation 3.7). These six are the 6 negative questions from the fuller General Health Questionnaire GHQ-12 measure of psychological distress. The data set does not provide data on the other six 'positive' questions. Thus our focus is upon negative affect. The rank ordering is the same once again - France the most depressed, then the UK, and then Denmark the least depressed. Column 3 then estimates an ordered logit with the dependent variable whether an individual reports whether they feel 'unhappy or depressed'; column 4 models whether they 'had been feeling constantly under strain' and column 5 refers to whether they had 'lost much sleep over worry'. The rankings were once again in all cases France the most depressed and Denmark least depressed. Column 6 of Table 9 uses a different question from another *Eurobarometer #64.4* - the respondent was asked whether during the preceding four weeks they had felt 'downhearted and depressed'. Rankings were the same - France then the UK and then Denmark. In all six columns unhappiness follows an inverse U-shape in age. There seems very clear evidence then that the findings in both happiness and unhappiness equations are highly stable across datasets, countries and however the question is asked. The evidence does seem to suggest dramatic stability in the cross country rankings.

The Macro-economics of Well-being

I have increasingly become interested in the well-being data in the role as a macro policy maker. In the raw data happiness (and life satisfaction) is negatively correlated with unemployment (Figure 3) and inflation (Figure 4). It also appears that happiness is positively correlated with GDP growth (Figure 5 – taken from Leigh and Wolfers (2006)). When a nation is poor it appears that extra riches raise happiness. However, income growth in richer countries is not correlated with growth in happiness. This is the Easterlin hypothesis (Easterlin, 1974) and

is illustrated in Figure 6, which uses data from the 1995/2000 *World Values Survey*; the slope of the function for western countries is approximately horizontal.

There is a small body of literature which uses SWB data across countries and through time to estimate a 'misery index'. Di Tella, McCullough and Oswald (2001) use life satisfaction data to show that people are happier when both inflation and unemployment are low. They find that unemployment depresses well-being more than does inflation. Wolfers (2003) has shown that greater macro volatility undermines wellbeing.

In Blanchflower (2007) I found that that both higher unemployment and higher inflation lower happiness. Table 10 uses aggregate data by country*year cell from the World Database of Happiness. In all cases the rank ordering is France, the UK, the USA with Denmark highest once macro controls such as the unemployment and inflation rates are included in time series happiness equations. Interest rates are also found to enter happiness equations negatively. Consistent with the Easterlin hypothesis, rising GDP per capita does not raise happiness for developed countries. There is evidence, however, that higher GDP per capita has a positive effect for poorer countries. This impact is especially marked for the former Communist countries of the Czech Republic, Hungary, Poland and Slovakia. I estimate the unemployment/inflation trade-off as closer to one and a half than one as implied by the 'misery index'. I find that the least educated and, somewhat surprisingly, the old put the highest weight on unemployment. Conversely, the young and the most educated put the greatest weight on inflation. Unemployment *is* more costly than inflation in terms of its impact on wellbeing. My estimates imply that, across EU countries, a one percentage point increase in the unemployment rate lowers well being by approximately 1.6 times as much as a one percentage point increase in the inflation rate.

Past experience of high inflation during an individual's adult lifetime lowers their happiness, over and above the impacts from higher contemporaneous inflation and/or unemployment rates. Table 11 uses micro data on individuals and presents the evidence on whether individuals' personal experiences of inflation over their lifetime have any incremental value in explaining their level of life satisfaction. Column 1 of Table 11 estimates an OLS for a subset of countries for which I have long time series of inflation data back to the 1950s (Austria; Belgium; Denmark; France; Germany; Greece; Ireland; Italy; Netherlands; Norway; Portugal; Spain; Sweden; UK).. Column 2 adds the variable reflecting the *average* annual inflation experience of each individual in our sample given their age, country, and year the life satisfaction survey was conducted; this term is insignificant. Column 3 substitutes the average annual experience term, for the *highest* annual inflation rate experienced by each individual over their adult life. This term is negatively signed and significant, and its inclusion has essentially no effect on either the coefficients on inflation or unemployment. The coefficient on individual unemployment is little different from the full sample case. An individual who has experienced high inflation in the past has lower happiness today, even holding constant today's inflation and unemployment rates. Unemployment appears to be more costly than inflation in terms of its impact on wellbeing. It is unclear that there is any information from NTA that would improve these equations.

I recall John Abowd saying to me at a very early seminar given at the NBER, that the crucial test for the happiness data is whether or not it has any predictive power. Little work has so far been done on this question, but in some recent work I found that life satisfaction levels in Eastern European countries is a good *predictor* of migration flows to the UK. On May 1st 2004 to the so called A8 accession countries (the Czech Republic; Estonia; Hungary; Latvia;

Lithuania; Poland; Slovakia; and Slovenia) joined the European Union.⁸ Citizens from the A8 nations obtained free movement and the right to work in the UK, Ireland and Sweden from May 1st 2004.⁹ Gilpin et al (2006) examined data for the UK drawn from the Worker Registration Scheme, which registers the A8 workers, and computed the number of WRS registrations as a percentage of the home country population and show it is correlated with GDP and unemployment. I updated their analysis in Table 12. It is apparent that a larger fraction of people from Lithuania (1.85%); Latvia (1.43%); Slovakia (1.13%) and Poland (1.02%) have come to the UK compared to Estonia (0.47%), the Czech Republic (0.28), Hungary (0.19) and Slovenia (0.03). Gilpin et al. found that countries with the lowest GDP per head, such as Lithuania (2,500 Euros) are more likely to be registered on the UK WRS than those from countries with higher GDP, such as Slovenia (11,400 Euros).¹⁰ Workers in the WRS data are also more likely to come from countries with the highest unemployment rates, such as Poland (19.0%). The correlation coefficient is clearly highest with 2005 GDP per head, as noted by Gilpin et al., and even higher when GDP is in logs ($r=-0.832$). The correlation is slightly weaker with the unemployment rate, but especially low with the employment rate. The propensity to migrate is even more highly correlated with life satisfaction than it is with GDP per capita (Blanchflower and Shadforth, 2007).

⁸ In addition Malta and (South) Cyprus also joined the EU at that date. Bulgaria and Romania joined the EU on January 1st 2007.

⁹ Finland, Greece, Portugal and Spain opened their labour markets to these workers on May 1st 2006, while Italy followed in late July 2006. Five other countries (Belgium, Denmark, France, the Netherlands and Luxembourg) alleviated restrictions in 2006 (Zaiceva, 2006).

¹⁰ Expressed as Euros per inhabitant at 1995 exchange rates and prices.

Of interest is whether life satisfaction or happiness is correlated with people's expectations of the economic situation. It turns out that they are. Respondents in thirteen separate *Eurobarometers* for the period 1995-2006 were asked the following questions.

"What are your expectations for the next twelve months: will the next twelve months be better; worse or the same when it comes to a) your life in general b) the economic situation in (our country) c) the financial situation of your household d) the employment situation in (our country) d) your personal job situation?"

Data are available on 15 countries for all twelve years (Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal, Spain, Sweden and the UK). Data for the fifteen Accession and Candidate countries (Republic of Cyprus; Czech Republic; Estonia; Hungary; Latvia; Lithuania; Malta; Poland; Slovakia; Slovenia; Bulgaria; Romania; Turkey; Croatia and Cyprus (Turkish Cypriot Community) are present for only 2004-2006. In eight separate surveys respondents were also asked about their expectations for themselves ten years hence - *"In the course of the next five years, do you expect your personal situation to improve, to stay about the same or get worse?"*. Life satisfaction is further reported in a subset of these surveys. We examine three of these responses here.

Table 13 reports results of estimating ordered logits for parts b), d) and a) as well as for life five years ahead. The dependent variable is coded as one if the response was 'worse', 2 if 'the same' and 3 if 'better', so positive coefficients should be interpreted once again as suggesting the variable raises the probability of life improving. Column 1 and 2 of Table 13 relates to the individual's views on the economic situation, columns 3 and 4 to the employment situation and columns 5 and 6 to their life over the following twelve months and columns 7 and eight for life over the following five years. In each case separate results are provided with and without three life satisfaction controls derived from the standard 4 category life satisfaction variable.

Happiness enters significantly and positively in each of these equations. This is similar to findings by Guven (2007) who found using data from the Netherlands and Germany that happiness increases savings, decreases expenditures, and the marginal propensity to consume is lower for the happy people. Happy people, Guven found, are a) more risk averse in financial decisions b) expect to live longer c) are more concerned about the future than the present d) expect lower prices in the future e) are less likely to smoke and f) do not desire to move within a country.

There is a common pattern in the control variables across all eight specifications. Optimism 1) rises with educational attainment 2) is U-shaped in age 3) is lower for married and widowed, the unemployed and is higher the greater the level of current happiness. The country ranking in relation to people's views on the economic and employment situations is once again France, UK and then Denmark. The British, though are especially optimistic that their life will improve and the Danes now less optimistic than the French. Happier people, it turns out, are less pessimistic about the state of the economy as well, unsurprisingly, about how their life will proceed. These country rankings are consistent with the evidence from the ESS 2002 reported in Table 7 above respectively, where the respondents report on their current views on the economy, government and democracy.

Interestingly, respondents seem more optimistic about their own lives than they are about the economy or the employment situation in their country. For example, in the UK respondents are twice as likely to report that they think their own situation will improve, than think that either the economic situation or the employment situation of the country will improve. Moreover, the trend in the former is up, while the trend in the latter is down. The proportion of UK respondents saying that the situation in 12 months will be 'better' for the economic and employment situations

blood-pressure problems. There are long consistent time runs of data available for macro-economic analysis dating back to the early 1970s. Well-being across *nations* is correlated with the unemployment rate, the current inflation rate and the highest inflation rate in a person's adult life as well as GDP growth rates in poorer countries. Happiness and life satisfaction data help to forecast including migration flows. Happy people are particularly optimistic about the prospects for the economy.

Work on NTA appears to be an important complement to this work. Nations have different languages and cultures, and in principle this may cause biases in happiness surveys. KKSSS have identified that there appears to be a bias when comparing results from France with those from the US. They found that, on average, the French spent their days in a more positive mood and more of their time engaged in activities that tend to yield more pleasure than do Americans. The Americans seem to be more emphatic when reporting their well-being.

A big question going forward is how to incorporate the findings from national time use with those from the subjective well-being literature. Of interest will be whether there are differences, for example, between countries who speak the same language such as the UK, Australia, Canada and New Zealand. Are there significant differences between the results obtained from NTA and SWB in other countries besides the US and France? Nations have different languages and cultures, and in principle that may cause biases, perhaps large ones, in happiness surveys. At this point in research on subjective well-being, the size of any bias is not known, and there is no accepted way to correct the data, but progress is being made. NTA and SWB appear to be complements rather than substitutes. There is still much work to be done.

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Table 1. U-Index, happiness and life satisfaction for Various Demographic Groups

	PATS	GSS	EB	LB
Sex				
Men	17.6%	30.9	27.0	30.5
Women	19.6	31.3	26.8	30.1
Race/Ethnicity				
White	17.5	32.7		
Black	23.8	26.6		
Hispanic	21.9	24.8		
Household Income				
<\$30,000	22.5	31.8		
\$30,000-\$50,000	18.6	23.6		
\$50,000-\$100,000 (\$110k)	18.6	38.2		
>\$100,000	15.7	46.8		
Education				
<High School/<16 years	20.5	28.9	19.3	28.0
High School/16-19 years	21.3	31.2	25.1	31.6
Some College/20+ years	19.6	31.7	34.8	32.4
College/still studying	15.6	37.2	32.5	
Masters	16.6	36.6		
Doctorate	11.3	36.4		
Men				
15-24	18.8	23.4	28.0	34.1
25-44	17.1	29.2	25.7	30.8
45-64	18.7	33.0	25.9	27.6
65+	15.6	39.8	30.5	28.0
Married	17.4	39.0	29.3	33.6
Divorced/Separated	24.3	17.5	18.6	27.1
Widowed	20.2	22.1	21.6	
Never Married	16.9	20.3	23.3	29.1
Women				
15-24	18.9%	29.5	28.9	33.7
25-44	20.5	32.0	28.1	30.5
45-64	20.9	33.5	25.4	26.6
65+	16.1	33.6	24.6	28.7
Married	17.4	41.6	29.4	32.9
Divorced/Separated	24.5	20.3	18.7	29.0
Widowed	22.3	25.0	20.7	
Never Married	23.2	24.1	24.9	29.8

Notes: U-index is proportion of time that rating of sad, stressed or pain exceeds happy.

Source: GSS pooled 2000, 2002, 2004, 2006 - % very happy. Eurobarometers for EU15, 2000-2006 % very satisfied (Austria; Belgium; Denmark; Finland; France; Germany; Greece; Ireland; Italy; Luxembourg; Netherlands; Portugal; Spain; Sweden and UK). PATS Krueger et al (2007) Table 5.1 using Princeton Affect and Time Survey data. Latinobarometer 2005 % very satisfied (Argentina; Bolivia; Brazil; Colombia; Costa Rica; Chile; Dominican Republic; Ecuador; El Salvador; Guatemala; Honduras; Mexico; Nicaragua; Panama; Paraguay; Peru; Uruguay and Venezuela. Education categories for the LB are <9 years schooling; 10-12 years and >12 years.

Table 2a. Life satisfaction and country characteristics, France, Denmark, UK and USA

A) 4 step life satisfaction

	KKSSS 2006		Eurobarometer 2000-2006		
	Women		Women	Women	Women
	<u>U.S.</u>	<u>France</u>	<u>France</u>	Denmark	UK
Not at all satisfied	1.6	1.1	4.5	0.6	2.2
Not very satisfied	21.4	16.1	15.1	2.7	8.4
Satisfied	51.0	70.0	64.5	31.7	56.6
Very Satisfied	26.1	12.9	15.9	65.0	32.9
Score	3.00	2.94	2.92	3.62	3.21
N	810	816	7,074	6,700	9,457

B) 10 step life satisfaction for women (WVS)

	France	Denmark	UK	USA
1981-1984	6.75	8.27	7.55	7.73
1989-1993	6.82	8.07	7.65	7.65
1999-2004	6.97	8.23	7.68	7.65

C) World Database of Happiness - men and women combined

	France	Denmark	UK	USA
4 step life satisfaction				
2001	2.90	3.59	3.17	3.35
2002	2.89	3.59	3.14	3.33
2003	2.86	3.56	3.16	3.41
2004	2.96	3.60	3.22	3.42

D) Macro data

	France	Denmark	UK	USA
GDP/capita (PPPUS\$)	\$29,300	\$31,914	\$30,821	\$39,676
Gini coefficient	32.7	24.7	36.0	40.8
Unemployment rate	8.6%	3.3%	5.4%	4.7%
Long-term unemployment	44.8%	20.7%	27.5%	10.7%
Youth unemployment	23.9%	7.6%	13.9%	10.5%

Notes: score is obtained by calculating a weighted average of responses where 1=not at all satisfied, 2=not very satisfied, 3=satisfied and 4=very satisfied. Youth and long-term unemployment are both for males. Youth unemployment is for ages 15-24. Data source: <http://hdrstats.undp.org/indicators/#L>

Table 2b. Suicide Rates (per 100,000)

United States

	<i>1950</i>	<i>1955</i>	<i>1960</i>	<i>1965</i>	<i>1970</i>	<i>1975</i>	<i>1980</i>	<i>1985</i>	<i>1990</i>	<i>1995</i>	<i>2000</i>	<i>2002</i>
Total	7.6	10.2	10.6	11.1	11.5	12.7	11.8	12.3	12.4	11.9	10.4	11.0
Male	17.7	15.9	16.4	16.7	16.7	18.9	18.6	19.9	20.4	19.8	17.1	17.9
Female	2.5	4.5	4.9	6.1	6.5	6.8	5.4	5.1	4.8	4.4	4.0	4.2

France

	<i>1950</i>	<i>1955</i>	<i>1960</i>	<i>1965</i>	<i>1970</i>	<i>1975</i>	<i>1980</i>	<i>1985</i>	<i>1990</i>	<i>1995</i>	<i>2000</i>	<i>2003</i>
Total	15.2	15.9	15.8	15.0	15.4	15.8	19.4	22.5	20.0	20.6	18.4	18.0
Male	23.7	24.6	23.9	23.0	22.8	22.9	28.0	33.1	29.6	30.4	27.9	27.5
Female	7.2	7.8	8.2	7.5	8.4	9.0	11.1	12.7	11.1	10.8	9.5	9.1

Denmark

	<i>1950</i>	<i>1955</i>	<i>1960</i>	<i>1965</i>	<i>1970</i>	<i>1975</i>	<i>1980</i>	<i>1985</i>	<i>1990</i>	<i>1995</i>	<i>2000</i>	<i>2001</i>
Total	23.3	23.3	20.3	19.3	21.5	24.1	31.6	27.9	23.9	17.7	13.6	13.6
Male	31.7	32.0	27.2	24.0	27.4	29.9	41.1	35.1	32.2	24.2	20.2	19.2
Female	15.0	14.8	13.6	14.7	15.7	18.4	22.3	20.6	16.3	11.2	7.2	8.1

UK

	<i>1950</i>	<i>1955</i>	<i>1960</i>	<i>1965</i>	<i>1970</i>	<i>1975</i>	<i>1980</i>	<i>1985</i>	<i>1990</i>	<i>1995</i>	<i>1999</i>	<i>2004</i>
Total	9.5	10.7	10.7	10.4	7.9	7.5	8.8	9.0	8.1	7.4	7.5	7.0
Male	12.7	13.6	13.3	12.2	9.4	9.0	11.0	12.4	12.6	11.7	11.8	10.8
Female	6.5	8.0	8.2	8.7	6.5	6.0	6.7	5.8	3.8	3.2	3.3	3.3

Source: http://www.who.int/mental_health/prevention/suicide/country_reports/en/index.html

Table 3a; Happiness equations, ISSP 1998 and 2001

	1998		2001	
	(1)	(2)	(3)	(4)
Denmark	.6415 (7.32)	.6554 (7.39)	.2451 (2.86)	.2664 (3.05)
France	-.2635 (3.00)	-.3977 (4.49)	.2699 (3.22)	.3043 (3.59)
UK	.8500 (10.55)	.8920 (10.97)	.5855 (7.64)	.7097 (9.16)
Australia	.6791 (8.06)	.6196 (7.17)	.2599 (3.12)	.2942 (3.41)
Austria	.3595 (4.02)	.3139 (3.48)	.3252 (3.63)	.4093 (4.52)
Brazil			1.2895 (16.34)	1.4270 (17.10)
Bulgaria	-1.4468 (16.31)	-1.4724 (16.39)		
Canada	.2404 (2.63)	.0987 (1.06)	.5587 (6.42)	.5751 (6.45)
Chile	-.5378 (6.32)	-.6176 (7.20)	.4707 (5.64)	.5407 (6.39)
Cyprus	-.2714 (2.95)	-.4533 (4.88)	-.9342 (10.26)	-1.0880 (11.83)
Czech Republic	-.3740 (4.41)	-.4048 (4.73)	-.5579 (6.47)	-.5132 (5.87)
East Germany	-.6886 (7.70)	-.5614 (6.25)	-.3648 (3.18)	-.2484 (2.16)
Finland			-.3058 (3.65)	-.3262 (3.79)
Hungary	-1.5248 (17.34)	-1.4973 (16.84)	-.7982 (9.71)	-.6713 (8.06)
Ireland	1.2023 (13.53)	1.2171 (13.51)		.0850 (1.02)
Israel	-.1655 (1.88)	-.3189 (3.59)	-.3637 (4.10)	-.4534 (5.06)
Italy	-.3475 (3.88)	-.4527 (5.03)	-.6034 (6.64)	-.8020 (8.56)
Japan	.0343 (0.41)	-.1062 (1.26)	.1487 (1.76)	.0985 (1.15)
Latvia	-1.4895 (17.63)	-1.5736 (18.41)	-1.4145 (15.85)	-1.3995 (15.50)
Netherlands	.7338 (9.48)	.7252 (9.30)		
New Zealand	.7760 (8.70)	.7544 (8.31)	.7155 (8.27)	.7782 (8.80)
Norway	.2935 (3.58)	.2269 (2.73)	.0872 (1.06)	.0850 (1.02)
Philippines	.2444 (2.79)	-.0038 (0.04)	.1119 (1.28)	.0772 (0.87)
Poland	-.0188 (0.21)	-.0332 (0.38)	-.5691 (6.61)	-.5061 (5.83)
Portugal	-.9207 (10.49)	-1.0417 (11.82)		
Russia	-1.3633 (16.72)	-1.4252 (17.16)	-2.5134 (32.28)	-2.5377 (32.23)
Slovenia	-.7625 (8.47)	-.9077 (9.99)	-.5625 (6.31)	-.6460 (7.17)
Slovenia	-.9608 (11.40)	-1.1135 (13.04)	-.5625 (6.31)	-.6459 (7.17)
South Africa			-.1925 (2.46)	-.0077 (0.10)
Spain	.1531 (2.03)	.0883 (1.17)	-.2714 (3.20)	-.2837 (3.31)
Sweden	.2767 (3.18)	.1541 (1.75)		
Switzerland	.5572 (6.49)	.5453 (6.28)	.7205 (8.12)	.7698 (8.52)
USA	.8065 (9.49)	.8325 (9.72)	.7800 (8.98)	.9193 (10.45)
Age	-.0738 (17.72)			-.0630 (15.17)
Age ²	.0006 (14.76)			.0006 (13.29)
Male	-.0960 (4.23)			-.0180 (0.80)
Personal controls	No	Yes	No	Yes
cut1	-3.6133	-5.4182	-3.5164	-4.9288
cut2	-1.5153	-3.2445	-1.7275	-3.0885
cut3	1.4123	-.2039	1.1509	-.1180
N	37,875	37,521	35,950	35,219
Pseudo R ²	.0607	.0857	.0765	.0964

Source: 1998 and 2001 ISSP. Notes; personal controls are marital status and labor market status dummies. Excluded country West Germany. *'If you were to consider your life in general how happy would you say you are, on the whole – not at all happy; not very happy; fairly happy, very happy'.*

Table 3b. Happiness and role of the family from the ISSP 2002

	<i>Happiness</i>		<i>Family</i>	
	(1)	(2)	(3)	(4)
Denmark		-.1159 (1.53)		.3825 (4.95)
France		-.3039 (4.40)		-.4605 (6.41)
UK		.3613 (5.65)		.3082 (4.65)
Age	-.1084 (7.26)	-.0705 (19.55)	-.1032 (7.06)	-.0675 (18.53)
Age ²	.0011 (7.29)	.0006 (17.50)	.0010 (6.91)	.0006 (17.03)
Male	-.0261 (0.35)	.0507 (2.68)	-.0758 (1.02)	.1118 (5.87)
No formal education	.5095 (1.36)	.0208 (0.49)	-.1011 (0.28)	.0432 (1.05)
Above lowest formal	.2813 (2.02)	.1833 (4.32)	-.0020 (0.01)	.1848 (4.43)
Higher secondary	.5644 (3.97)	.2459 (5.81)	.0738 (0.21)	.2191 (5.28)
Above secondary	.5243 (3.75)	.2957 (6.52)	.0035 (0.01)	.2207 (4.93)
University degree	.8726 (6.44)	.4026 (8.92)	.1145 (0.33)	.2392 (5.37)
Married	.9005 (9.00)	.7009 (26.23)	1.1943 (11.93)	.8491 (31.05)
Widowed	.0561 (0.30)	-.2500 (5.54)	.4089 (2.24)	-.1107 (2.41)
Divorced	-.0866 (0.63)	-.2372 (5.46)	.0597 (0.44)	-.3134 (6.96)
Separated	-.4838 (2.16)	-.3636 (5.53)	-.3306 (1.53)	-.5151 (7.85)
Public sector	.0291 (0.29)	.0392 (1.41)	-.0114 (0.12)	.0050 (0.18)
Self-employed	.0980 (0.65)	.1061 (3.11)	.1601 (1.08)	.0911 (2.69)
Unpaid family worker	-.7075 (0.91)	.0398 (0.33)	.2213 (0.25)	-.0415 (0.35)
Unemployed	-.2388 (1.24)	-.5482 (12.92)	-.2223 (1.17)	-.3923 (9.24)
Student	.0559 (0.28)	.1459 (3.13)	.0872 (0.42)	.1028 (2.16)
Retired	-.0991 (0.67)	-.0496 (1.34)	-.0267 (0.18)	-.0625 (1.68)
Housewife	-.0016 (0.01)	.0363 (1.01)	-.0246 (0.18)	.0038 (0.11)
Disabled	-.5181 (1.04)	-.4661 (6.60)	-.5115 (1.11)	-.3052 (4.29)
Other labor mkt.	-.3538 (1.35)	-.2712 (4.43)	-.5177 (1.94)	-.2909 (4.77)
Austria		.4277 (6.34)		.5102 (7.24)
Brazil		.4371 (6.13)		-.3380 (4.64)
Bulgaria		-1.6116 (20.47)		-1.3513 (16.66)
Chile		.4715 (6.41)		.5708 (7.70)
Cyprus		-.0927 (1.16)		-.1089 (1.38)
Czech Republic		-.7562 (10.08)		-.8577 (11.23)
East Germany		-.6619 (6.41)		-.1039 (0.98)
Estonia		-.2654 (4.06)		-.2251 (3.37)
Finland		-.3428 (4.44)		-.3863 (4.86)
Flanders		-.3712 (4.98)		-.2767 (3.62)
Hungary		-.5945 (7.41)		-.2962 (3.59)
Ireland		-.0298 (0.41)		.4107 (5.34)
Israel		-.2329 (3.00)		.1679 (2.13)
Japan		.2953 (3.70)		-.2731 (3.40)
Latvia		-1.1807 (14.87)		-1.1642 (14.13)
Mexico		.5591 (7.34)		.8134 (10.61)
Netherlands		-.2270 (3.06)		-.1761 (2.30)
New Zealand		.2682 (3.30)		.1114 (1.34)
Norway		-.1811 (2.48)		-.0272 (0.37)

Philip		.1092 (1.37)		.0601 (0.74)
Poland		-.7878 (10.48)		-.3929 (5.11)
Portugal		-.3820 (4.82)		-.2205 (2.75)
Russia		-1.0997 (15.45)		-1.0436 (14.00)
Slovakia		-.9487 (12.21)		-.8533 (10.61)
Slovenia		-.4791 (6.15)		-.1456 (1.81)
Sweden		-.2411 (3.06)		.0495 (0.60)
Switzerland		.3338 (4.28)		.2935 (3.68)
Taiwan		-.3847 (5.59)		-.4845 (6.95)
USA	.6701 (8.30)	.4169 (5.45)	.7448 (9.36)	.3612 (4.56)
West Germany		-.4315 (5.36)		-.0499 (0.60)
Cut1	-8.1600	-7.5073	-6.3764	-6.4968
Cut2	-6.0305	-5.9530	-5.2860	-5.4063
Cut3	-4.5138	-4.5258	-3.9864	-4.1993
Cut4	-3.0443	-2.9599	-3.0898	-3.0322
Cut5	-.7444	-.8420	-1.3159	-1.1549
Cut6	1.1677	1.1391	.2919	.7428
Pseudo R ²	.0460	.0456	.0444	.0442
N	2,885	44,468	2,859	43,657

Notes: excluded categories: lowest formal qualification and private sector employee and Australia. T-statistics in parentheses. Columns 1 and 3 are USA and France only. Columns 1 are 2 are responses to the question '*If you were to consider your life in general, how happy or unhappy would you say you are, on the whole?*' (Respondents answered on a 7-point scale). Column 2 refers to the following question. '*All things considered, how satisfied are you with your family life?*' (Respondents answered on a 7-point scale). Scale is from completely unhappy; very unhappy; fairly unhappy; neither; fairly happy; very happy and completely happy.

Table 4. Wanting to spend time with the family - ranked by % in 2005 (%)

	<i>1997</i>	<i>2005</i>
United States	41.9	55.3
Dominican Republic		55.3
Mexico		43.5
Philippines	50.8	38.7
Canada	23.3	37.8
South Africa		36.7
France	34.3	33.7
Israel	35.6	33.5
New Zealand	23.9	28.6
Australia		28.5
Ireland		28.1
United Kingdom	31.6	27.7
East Germany	29.8	25.7
Sweden	27.9	25.7
Norway	25.5	24.8
Slovenia	26.3	23.3
West Germany	24.5	21.4
Denmark	21.0	21.2
Portugal	34.1	19.8
Russia	23.9	19.3
Hungary	19.1	18.7
Switzerland	22.8	17.1
Bulgaria	14.7	16.7
Czech Republic	25.2	15.1
Spain	7.8	15.0
Finland		14.4
South Korea		13.1
Japan	7.5	9.1
Taiwan		8.9
Cyprus	25.2	7.2
Bangladesh	5.1	
Italy	15.7	
Latvia	15.6	
Netherlands	14.6	
Poland	23.4	

Notes: Question asked is 'Suppose you could change the way you spend your time, spending more time on some things and less time on others. Which of the things on the following list would you like to spend more time on, which would you like to spend less time on and which would you like to spend the same amount of time on as now? Time with your family?' (1= Much more time; 2= A bit more time; 3= Same time as now; 4= A bit less time; 5= Much less time). tabulated are the proportions saying 'much more time with their family'.

Source: International Social Survey Programme 1997 (n=32,783) and 2005 (n=43,440).

Table 5. Life satisfaction and happiness – World Values Survey, 1981-2004 (ordered logits)

	<i>Life satisfaction</i>		<i>Happiness</i>	
France	-.1073 (3.88)	-.1470 (5.11)	.4227 (13.64)	.4426 (13.74)
Denmark	.9958 (31.91)	1.0033 (31.47)	.8450 (24.83)	.8625 (24.78)
UK	.5004 (22.79)	.2823 (11.91)	.8036 (30.05)	.6773 (23.67)
USA	.5197 (23.77)	.3480 (14.59)	.6959 (28.04)	.5800 (21.41)
Age		-.0377 (22.09)		-.0491 (26.11)
Age ²		.00046 (24.75)		.00050 (24.63)
Male		-.0765 (8.45)		-.0848 (8.38)
Married		.1907 (14.98)		.4063 (28.44)
Living together		.2133 (10.00)		.3131 (13.04)
Divorced		-.3442 (14.18)		-.3737 (13.82)
Separated		-.4235 (12.29)		-.4364 (11.36)
Widowed		-.4123 (18.33)		-.4927 (19.98)
Part-time employee		-.0252 (1.56)		-.0064 (0.36)
Self-employed		.0361 (2.32)		.0612 (3.50)
Retired		-.2202 (12.43)		-.2276 (11.73)
Home worker		.0607 (4.21)		.1494 (9.35)
Student		-.0158 (0.84)		.0824 (3.87)
Unemployed		-.6850 (40.79)		-.4884 (26.36)
Other		-.2326 (6.80)		-.0245 (0.64)
cut1	-3.4057	-4.0057	-3.6190	-4.3648
cut2	-2.8445	-3.4499	-1.4905	-2.2030
cut3	-2.2542	-2.8627	1.0105	.42808
cut4	-1.8110	-2.4062		
cut5	-1.0434	-1.6032		
cut6	-.5878	-1.1143		
cut7	-.0103	-.4836		
cut8	.8544	.4453		
cut9	1.5985	1.2323		
Year dummies	19	19	19	19
Schooling dummies	0	10	0	10
N	263,097	188,529	257,881	185,629
Pseudo R ²	0.0112	.0191	.0131	.0336

Notes: excluded categories – full-time employees. Excluded countries are Albania ; Algeria; Argentina; Armenia; Australia; Austria; Azerbaijan; Bangladesh; Belarus; Belgium; Bosnia and Herzegovina; Brazil; Bulgaria; Canada; Chile; China; Colombia; Croatia; Czech Republic; Dominican Republic; Egypt; El Salvador; Estonia; Finland; Georgia; Germany; Greece; Hungary; Iceland; India; Indonesia; Iran; Iraq; Ireland; Israel; Italy; Japan; Jordan; Korea; Kyrgyzstan; Latvia; Lithuania; Luxembourg; Macedonia ; Malta; Mexico; Moldova; Morocco; Netherlands; New Zealand; Nigeria; Norway; Pakistan; Peru; Philippines; Poland; Portugal; Puerto Rico; Romania; Russia; Saudi Arabia; Serbia and Montenegro; Singapore; Slovakia; Slovenia; South Africa; Spain; Sweden; Switzerland; Taiwan; Tanzania ; Turkey; Uganda; Ukraine; Uruguay; Venezuela; Vietnam and Zimbabwe.

Table 6. Happiness – European Quality of Life Survey, 2003, (Ordered logits)

	<i>Life satisfaction</i>		<i>Happiness</i>		<i>Health</i>	
France	.0779 (1.49)	.0513 (0.96)	-.0543 (1.03)	-.0701 (1.30)	.3720 (8.20)	.2721 (4.79)
Denmark	1.5679 (27.48)	1.5423 (25.89)	.9606 (17.02)	1.0026 (16.97)	.8766 (15.19)	1.0942 (17.68)
UK	.5391 (9.56)	.6097 (10.67)	.4984 (8.82)	.5652 (9.80)	.4743 (8.20)	.5836 (9.81)
Married/living together		.2475 (7.00)		.5383 (14.93)		.0206 (0.56)
Separated/Divorced		-.3006 (6.15)		-.3413 (6.87)		-.1919 (3.76)
Widowed		-.3592 (6.88)		-.3853 (7.30)		-.2235 (4.16)
Age		-.0491 (11.53)		-.0504 (11.73)		-.0710 (16.19)
Age ²		.00058 (13.39)		.0004 (11.36)		.00047 (10.53)
Male		-.0414 (1.74)		-.0574 (2.39)		.2531 (10.28)
Self-employed		.1508 (1.44)		-.1425 (1.39)		.6645 (10.93)
Manager		.3129 (3.05)		-.0101 (0.10)		.5866 (10.42)
Other white collar		.2325 (2.30)		-.1290 (1.33)		.5866 (10.42)
Manual		-.0476 (0.48)		-.2915 (3.09)		.6511 (12.22)
Home worker		.1153 (1.12)		-.1645 (1.64)		.4124 (8.67)
Unemployed		-1.0125 (9.59)		-1.1030 (10.83)		.4121 (7.28)
Retired		-.3582 (3.53)		-.5483 (5.45)		-.5277 (9.56)
Student		.3493 (2.70)		-.2029 (1.54)		.4854 (4.81)
cut1	-3.3194	-4.0423	-4.1951	-5.3403	-2.1166	-4.4594
cut2	-2.7899	-3.5023	-3.5763	-4.7141	-.5819	-2.6668
cut3	-2.2244	-2.9205	-2.9129	-4.0371	.7967	-1.0020
cut4	-1.7844	-2.4678	-2.3586	-3.4691	2.1705	.5224
cut5	-.8482	-1.4833	-1.3866	-2.4466		
cut6	-.3835	-.9889	-.8732	-1.8971		
cut7	.3294	-.2369	-.1090	-1.0759		
cut8	1.4811	.9554	1.0619	.1621		
cut9	2.3632	1.8467	1.9646	1.0908		
Schooling dummies	0	6	0	6	0	6
N	25,991	25,663	25,654	25,332	26,191	25,858
Pseudo R ²	.0076	.0247	.0035	.0269	.0040	.0870

Notes: excluded categories; single; other labour market activity, plus Austria; Belgium; Bulgaria; Cyprus; Czech Republic; Estonia; Finland; France; Germany; Greece; Hungary; Ireland; Italy; Latvia; Lithuania; Luxembourg; Malta; Netherlands; Poland; Portugal; Romania; Slovakia; Slovenia; Spain; Sweden and Turkey.

Table 7. Happiness, Life Satisfaction, Health and General Attitudes, 2002 (ordered logits)

	<i>Happiness</i>	<i>Life satisfaction</i>	<i>Health</i>	<i>Economy</i>	<i>Government</i>	<i>Democracy</i>
France	-.0016 (0.03)	-.5082 (10.71)	-.2363 (4.77)	-.6412 (14.03)	-.0795 (1.73)	-.4396 (9.33)
Denmark	.8828 (19.15)	1.1833 (25.38)	.7240 (13.79)	1.8913 (39.54)	1.1567 (23.99)	1.3780 (29.36)
UK	.2033 (5.01)	-.0617 (1.55)	.3085 (7.03)	.4661 (11.81)	.0117 (0.29)	-.3428 (8.56)
Married	.5126 (19.35)	.2702 (10.25)	.1512 (5.38)	-.0622 (2.35)	-.0033 (0.12)	-.0242 (0.91)
Separated	-.4287 (5.73)	-.4754 (6.39)	.0625 (0.78)	-.1916 (2.56)	-.1397 (1.81)	-.1558 (2.03)
Divorced	-.1309 (3.10)	-.2130 (5.06)	-.0487 (1.08)	-.1699 (4.04)	-.1314 (3.07)	-.1805 (4.23)
Widowed	-.4401 (10.00)	-.4055 (9.26)	-.1331 (2.93)	-.2950 (6.78)	-.1838 (4.09)	-.1375 (3.12)
Age	-.0789 (24.00)	-.0725 (22.14)	-.0716 (20.90)	-.0300 (9.19)	-.0344 (10.28)	-.0271 (8.24)
Age ²	.0007 (23.77)	.0007 (23.77)	.0003 (11.37)	.0003 (11.11)	.0004 (12.43)	.0003 (10.08)
Male	-.1421 (7.85)	-.1550 (8.59)	.1389 (7.25)	.1541 (8.48)	.0663 (3.55)	.1578 (8.63)
Schooling	.0403 (17.03)	.0486 (20.62)	.0682 (27.11)	.0406 (17.18)	.0181 (7.40)	.0348 (14.48)
Self-employed	-.0461 (1.45)	-.0575 (1.81)	.1365 (4.01)	-.2120 (6.59)	-.0876 (2.62)	-.0486 (1.51)
Not employed	-.2922 (13.25)	-.3163 (14.36)	-.4773 (20.43)	-.2050 (9.33)	-.1258 (5.57)	-.1627 (7.35)
cut1	-6.3055	-5.0623	-6.2461	-2.6039	-2.8078	-3.2601
cut2	-5.6224	-4.5712	-4.4254	-2.0428	-2.2439	-2.7231
cut3	-4.9425	-4.0161	-2.4436	-1.3672	-1.6025	-2.0742
cut4	-4.2389	-3.3945	-.3081	-.6938	-.9500	-1.4071
cut5	-3.7357	-2.9508		-.1570	-.4207	-.8728
cut6	-2.7478	-2.1598		.5671	.3647	-.0747
cut7	-2.2507	-1.7411		1.1983	.9962	.4599
cut8	-1.4475	-1.0251		2.0963	1.9090	1.2475
cut9	-.2258	.1222		3.3719	3.1896	2.4487
cut10	.9345	1.1579		4.4209	4.1051	3.5516
N	40,903	40,852	41,041	39,919	37,676	39,344
Pseudo R ²	.0149	.0138	.0788	.0154	.0056	.0093

Source: European Social Survey, 2002.

Notes; Excluded categories; single and employee plus Austria, Belgium, Czech Republic, Finland, Germany, Greece, Hungary, Ireland, Israel, Italy, Luxembourg, Netherlands, Norway, Poland, Portugal, Slovenia, Spain, Sweden and Switzerland.

Table 8. Life satisfaction in Europe, 1975-2006

	<i>1975-1989</i>	<i>1990-1999</i>	<i>2000-2006</i>	<i>1975-2006</i>	<i>1975-2006</i>
France	-1.5161 (88.25)	-1.4750 (68.29)	-1.3120 (52.90)	-1.4516 (23.07)	-1.4453 (123.72)
Denmark	.5820 (33.06)	.6031 (26.85)	.7707 (30.27)	.6346 (52.57)	.6311 (52.64)
UK	-.4656 (28.88)	-.5582 (27.77)	-.3871 (16.72)	-.4738 (42.96)	-.4685 (42.73)
Age	-.0389 (24.25)	-.0389 (20.22)	-.0365 (17.97)	-.0379 (36.35)	-.0439 (51.02)
Age ²	.00047 (27.08)	.00043 (21.14)	.00043 (19.86)	.00044 (39.84)	.00047 (51.96)
Male	-.1754 (18.19)	-.0995 (9.31)	-.0843 (7.04)	-.1275 (20.83)	-.0942 (18.76)
Married	.3341 (25.83)	.3063 (20.17)	.5527 (31.33)	.3630 (42.50)	.3511 (49.32)
Living together	.0490 (1.93)	.1442 (6.18)	.2338 (10.27)	.1268 (9.42)	.1562 (14.23)
Divorced	-.6085 (21.31)	-.4494 (16.53)	-.3219 (11.68)	-.4759 (30.20)	-.4055 (31.47)
Separated	-.7687 (18.55)	-.5679 (12.91)	-.4587 (10.78)	-.6017 (24.65)	-.5303 (25.42)
Widowed	-.3319 (16.10)	-.2200 (8.97)	-.1292 (4.59)	-.2566 (18.71)	-.2314 (20.58)
ALS 16-19	.2485 (24.71)	.1778 (13.86)	.1819 (11.16)	.2137 (30.26)	.2234 (37.68)
ALS ≥20	.4407 (33.33)	.3836 (25.62)	.4729 (25.82)	.4385 (51.61)	.4622 (66.14)
Still studying	.4254 (20.90)	.4591 (18.34)	.6357 (21.44)	.4998 (36.08)	.4997 (44.35)
Self-employed	.0801 (5.40)	.0167 (0.88)	.0628 (2.81)	.0514 (4.97)	.0358 (4.33)
Home worker	-.0332 (2.52)	-.0594 (3.50)	-.1582 (7.87)	-.0510 (5.60)	-.0412 (5.34)
Retired	-.0235 (1.37)	-.0950 (5.01)	-.1389 (6.75)	-.0863 (8.02)	-.1115 (12.76)
Unemployed	-1.0206 (54.66)	-1.0112 (49.64)	-1.1590 (46.81)	-1.0593 (88.25)	-.9557 (95.69)
Belgium	-.5811 (34.07)	-.7433 (34.84)	-.8530 (34.71)	-.6852 (58.64)	-.6809 (58.52)
Germany	-.8913 (52.16)	-1.2599 (66.97)	-1.3673 (62.25)	-1.1622 (07.17)	-1.1457 (106.75)
Ireland	-.4684 (26.80)	-.3616 (16.67)	-.3109 (12.60)	-.3968 (33.38)	-.3974 (33.62)
Italy	-1.7333 (99.51)	-1.3532 (62.52)	-1.4872 (58.95)	-1.5650 (31.22)	-1.5468 (131.58)
Luxembourg	-.2219 (8.95)	-.1188 (4.43)	-.1432 (5.02)	-.1594 (10.48)	-.1523 (10.04)
Austria					-.7195 (41.96)
Bulgaria					-3.4622 (108.59)
Croatia					-1.6853 (49.75)
Cyprus					-.7811 (22.28)
Czech Republic					-1.4738 (46.91)
Estonia					-1.9726 (61.17)
Finland					-.6119 (36.28)
Greece					-1.9742 (156.20)

Hungary					-2.3950 (74.57)
Latvia					-2.2816 (71.80)
Lithuania					-2.3225 (71.07)
Malta					-.8704 (18.67)
Norway					-.0103 (0.40)
Poland					-1.7470 (52.54)
Portugal					-1.8885 (142.58)
Romania					-2.8584 (87.56)
Slovakia					-2.2004 (70.75)
Slovenia					-.8661 (26.28)
Spain					-1.0737 (81.08)
Sweden					-.0893 (5.27)
Turkey					-1.2908 (34.25)
Year dummies	14	7	6	29	29
cut1	-4.6814	-4.8268	-5.0042	-4.7075	-4.8679
cut2	-3.0561	-2.9365	-3.1052	-2.9500	-3.0738
cut3	-.2110	-.2103	.0150	-.0900	-.2416
N	234,939	164,693	130,077	529,709	768,993
Pseudo R ²	.0731	.0656	.0908	.0749	.0845

Source: Eurobarometers, 1975-2006. Excluded categories; single, employee; ALS<16 and Netherlands. No data for 1996.

Table 9. Unhappiness equations

	(1) <i>Blood pressure</i> <i>OLOGIT</i>	(2) <i>GHQ-N6</i> <i>OLS</i>	(3) <i>Unhappy</i> <i>OLOGIT</i>	(4) <i>Strain</i> <i>OLOGIT</i>	(5) <i>Lost sleep</i> <i>OLOGIT</i>	(6) <i>Down and depressed</i> <i>OLOGIT</i>
France	-.1628 (1.60)	.6379 (4.12)	.2477 (2.85)	.2797 (3.19)	.2477 (2.85)	-.0831 (0.97)
Denmark	-.5664 (5.18)	-.6924 (4.38)	-.3992 (4.43)	-.2454 (2.69)	-.3992 (4.43)	-.2554 (2.91)
UK	-.5073 (5.13)	-.0158 (0.11)	.1519 (1.86)	-.0539 (0.64)	.1519 (1.86)	-.1884 (2.31)
Austria	.1772 (1.80)	-.0985 (0.63)	.0516 (0.60)	-.0816 (0.92)	.0516 (0.60)	-.2451 (2.82)
East Germany	.6290 (6.70)	.8156 (5.21)	.2159 (2.52)	.5190 (5.99)	.2159 (2.52)	-.3542 (3.33)
Finland	.1967 (1.99)	.5969 (3.81)	.2817 (3.22)	.3776 (4.27)	.2817 (3.22)	.0393 (0.46)
Greece	-.1284 (1.26)	.6818 (4.33)	.7509 (8.61)	.6417 (7.21)	.7509 (8.61)	.6515 (7.71)
Ireland	-.2044 (1.96)	-.0254 (0.16)	.0787 (0.90)	-.0859 (0.96)	.0787 (0.90)	-.0527 (0.62)
Italy	.1764 (1.76)	2.2381 (14.26)	1.1709 (13.58)	1.0001 (11.35)	1.1709 (13.58)	.8797 (10.56)
Luxembourg	-.2635 (2.14)	-.1069 (0.57)	-.0350 (0.33)	-.1633 (1.53)	-.0350 (0.33)	-.2981 (2.73)
Netherlands	-.4413 (4.19)	-.2764 (1.77)	.1471 (1.70)	-.1331 (1.49)	.1471 (1.70)	-.3098 (3.65)
Portugal	.6478 (6.60)	.4654 (2.87)	.3101 (3.50)	.1795 (1.98)	.3101 (3.50)	.4281 (4.85)
Spain	-.0715 (0.70)	.0852 (0.55)	.4111 (4.77)	-.1156 (1.29)	.4111 (4.77)	.1381 (1.59)
Sweden	-.7688 (6.98)	-.1259 (0.81)	-.0285 (0.32)	.1365 (1.54)	-.0285 (0.32)	-.2443 (2.79)
West Germany	.3636 (3.77)	.0516 (0.33)	-.3562 (4.00)	.1174 (1.34)	-.3562 (4.00)	-.2334 (2.72)
Age	.0675 (9.18)	.0958 (8.73)	.0580 (9.42)	.0551 (8.66)	.0580 (9.42)	.0403 (6.55)
Age ²	-.0003 (4.89)	-.0010 (9.22)	-.0006 (9.17)	-.0006 (9.75)	-.0005 (9.17)	-.0003 (6.15)
Male	.0222 (0.55)	-.4727 (7.73)	-.3122 (9.20)	-.1338 (3.91)	-.3122 (9.20)	-.3636 (10.62)
Age left schooling	-.0173 (3.53)	-.0211 (2.77)	-.0022 (0.53)	-.0044 (1.03)	-.0022 (0.53)	-.0174 (4.60)
Constant/cut 1	2.6653	1.4913	.6249	.8070	.6249	-.3043
cut 2	4.2449		2.5083	2.6542	2.5083	1.0063
cut 3	5.8586		4.1751	4.4382	4.1751	2.6996
cut 4						4.4722
Pseudo/Adjusted R ²	.0847	.1349	.0487	.0449	.0487	.0377
N	15,396	15,379	15,658	15,633	15,658	15,113

Notes to Table 5. The dependent variable in column 1 is a measure of reported problems of high blood-pressure. The question that forms the dependent variable is, “Would you say that you have not at all, no more than usual, rather more than usual, much more than usual...had problems of high blood pressure?” where 1=not at all; 2=no more than usual; 3=rather more than usual; 4=much more than usual.

The dependent variable in column 2 is a psychological distress score measured on a scale from 0 to 18. A GHQ-N6 score amalgamates answers to six questions: Have you recently: Lost much sleep over worry? Felt constantly under strain? Felt you could not overcome your difficulties? Been feeling unhappy and depressed? Been losing confidence in yourself? Been thinking of yourself as a worthless person? Its mean in the sample is 3.6 (s.d. 3.7).

The dependent variable in columns 3-5 are in order a) column 3 = 'Would you say that you have not at all, no more than usual, rather more than usual, much more than usual...been feeling unhappy and depressed?' b) column 4 = 'Would you say that you have not at all, no more than usual, rather more than usual, much more than usual... been feeling constantly under strain?' c) column 5 = 'Would you say that you have not at all, no more than usual, rather more than usual, much more than usual.. 'Would you say that you have not at all, no more than usual, rather more than usual, much more than usual... 'lost much sleep over worry?'

Personal controls are also included in columns 1-5 are 10 dummy variables relating to the individual's experiences before the age of 18; 16 labour-force status dummies; and 8 marital-status dummies. Belgium is the excluded nation.

The dependent variable in Column 6 models the following question 'These questions are about how you feel and how things have been with you during the past 4 weeks. For each question, please give the one answer that comes closest to the way you have been feeling...How much of the time during the past 4 weeks have you felt downhearted and depressed?'

Personal controls included in column 6 are 16 labour-force status dummies; and 8 marital-status dummies. Belgium is the excluded nation. T-statistics are in parentheses.

Source: columns 1-5: *Eurobarometer #56.1: Social Exclusion and Modernization of Pension Systems, September–October 2001*, ICPSR #3475 and Blanchflower and Oswald (2007a): Column 6 *Eurobarometer 64.4: Mental Well-Being, Telecommunications, Harmful Internet Content, and Farm Animal Welfare, December 2005-January 2006*, ICPSR #4667

Table 10. Macro Life satisfaction, 1973-2006

	(1)	(2)	(3)	(4)	(5)	(6)
France		-.1263 (6.67)	-.1279 (6.71)	-.1299 (6.82)	-.1294 (6.83)	-.1274 (6.76)
Denmark		.1728 (7.98)	.1786 (8.10)	.1818 (8.23)	.1808 (8.25)	.1746 (8.10)
Life satisfaction _{t-1}	.9790 (79.02)	.5683 (13.70)	.5714 (13.45)	.5627 (13.17)	.5641 (13.37)	.5622 (13.56)
Inflation _t	.0006 (0.42)	-.0027 (2.11)	-.0002 (0.14)	.0000 (0.01)		-.0025 (2.02)
Interest rate _t	-.0017 (1.10)		-.0039 (2.19)	-.0040 (2.24)	-.0042 (2.98)	
ΔGDP _t	.0020 (1.25)	.0014 (0.83)	.0030 (1.62)	.0018 (0.96)		
ΔGDP _t *poorer country				.0065 (1.62)	.0079 (2.13)	.0065 (1.87)
Unemployment _t	.0012 (1.27)	-.0044 (2.63)	-.0038 (2.18)	-.0042 (2.38)	-.0045 (2.73)	-.0049 (2.92)
Austria		-.0452 (2.21)	-.0448 (2.20)	-.0453 (2.23)	-.0458 (2.27)	-.0457 (2.24)
Belgium		-.0176 (1.22)	-.0182 (1.27)	-.0181 (1.27)	-.0186 (1.32)	-.0175 (1.22)
Czech Republic		-.1330 (4.26)	-.1358 (4.36)	-.1641 (4.60)	-.1648 (4.65)	-.1598 (4.57)
Finland		.0224 (1.08)	.0181 (0.87)	.0217 (1.04)	.0253 (1.24)	.0266 (1.30)
Germany		-.0558 (3.62)	-.0620 (3.91)	-.0627 (3.96)	-.0637 (4.07)	-.0562 (3.66)
Greece		-.1969 (7.35)	-.1902 (6.99)	-.2108 (7.03)	-.2116 (7.20)	-.2161 (7.45)
Hungary		-.2826 (7.33)	-.2672 (6.77)	-.2983 (6.81)	-.2975 (6.83)	-.3119 (7.39)
Ireland		.0279 (1.66)	.0200 (1.17)	.0248 (1.43)	.0320 (2.09)	.0338 (2.16)
Italy		-.1389 (6.82)	-.1317 (6.45)	-.1350 (6.60)	-.1344 (6.60)	-.1412 (6.95)
Japan		-.2325 (8.29)	-.2447 (8.19)	-.2493 (8.33)	-.2502 (8.52)	-.2355 (8.41)
Luxembourg		.0471 (2.69)	.0389 (1.91)	.0406 (1.99)	.0422 (2.12)	.0482 (2.77)
Mexico		-.2541 (4.35)	-.2396 (4.12)	-.2651 (4.41)	-.2670 (4.45)	-.2796 (4.66)
Netherlands		.0759 (4.37)	.0698 (4.00)	.0750 (4.24)	.0798 (4.72)	.0816 (4.83)
Poland		-.1199 (3.08)	-.1131 (2.86)	-.1333 (3.23)	-.1300 (3.18)	-.1382 (3.43)
Portugal		-.2237 (8.15)	-.2270 (7.94)	-.2524 (7.75)	-.2547 (7.91)	-.2474 (8.09)
Slovakia		-.1863 (4.40)	-.1995 (4.63)	-.2306 (4.90)	-.2273 (5.01)	-.2141 (4.73)
Spain		-.0561 (2.80)	-.0598 (2.96)	-.0802 (3.37)	-.0810 (3.50)	-.0756 (3.28)
Sweden		.0741 (3.38)	.0760 (3.48)	.0783 (3.59)	.0787 (3.63)	.0759 (3.47)
USA		.1124 (3.97)	.1030 (3.63)	.1045 (3.69)	.1060 (3.78)	.1140 (4.05)
Constant	.0619 (1.27)	1.4282 (10.59)	1.4098 (9.95)	1.4342 (10.06)	1.4324 (9.71)	1.4444 (10.72)
Year dummies	31	31	31	31	31	31
Adjusted R ²	.9532	.9631	.9636	.9636	.9638	.9634
N	405	423	405	405	405	423

Notes: 'poorer countries' are Czech Republic; Greece; Hungary; Mexico; Poland; Portugal; Spain and Slovakia. UK is excluded.

Source: Eurobarometers, 1973-2006 and Blanchflower (2007)

Table 11: Micro Life satisfaction, 1973-2006

	(1)	(2)	(3)
Denmark	.3220 (21.96)	.3212 (21.82)	.3206 (21.78)
France	-.3271 (23.35)	-.3254 (23.29)	-.3254 (22.99)
Inflation _t	-.0094 (5.16)	-.0095 (5.18)	-.0096 (5.25)
Unemployment rate _t	-.0114 (5.82)	-.0115 (5.88)	-.0119 (6.05)
Average inflation experience		-.0010 (1.02)	
Highest inflation experience			-.0001 (3.44)
Age	-.0133 (16.42)	-.0133 (16.38)	-.0134 (16.74)
Age ²	.0001 (18.68)	.0001 (18.58)	.0001 (19.11)
Male	-.0327 (10.48)	-.0328 (10.43)	-.0329 (10.51)
16-19 yrs schooling	.0873 (17.72)	.0873 (17.73)	.0871 (17.80)
20+ yrs schooling	.1664 (26.12)	.1665 (26.13)	.1664 (26.23)
Still studying	.1178 (7.88)	.1174 (7.84)	.1174 (7.82)
Married	.1186 (19.86)	.1185 (19.84)	.1189 (19.92)
Living as married	.0481 (7.38)	.0483 (7.38)	.0496 (7.61)
Divorced	-.1621 (20.04)	-.1623 (20.05)	-.1622 (20.05)
Separated	-.2065 (19.13)	-.2065 (19.12)	-.2061 (19.12)
Widowed	-.0866 (13.17)	-.0864 (13.09)	-.0852 (12.95)
Self-employed	.0057 (1.22)	.0057 (1.20)	.0056 (1.19)
Home	-.0243 (4.80)	-.0244 (4.80)	-.0244 (4.81)
Student	.0710 (4.90)	.0713 (4.92)	.0715 (4.93)
Retired	-.0395 (6.88)	-.0394 (6.84)	-.0395 (6.89)
Unemployed	-.3657 (29.77)	-.3658 (29.74)	-.3660 (29.71)
Austria	-.0956 (4.17)	-.0969 (3.45)	-.0904 (3.96)
Belgium	-.0807 (0.23)	-.0955 (4.17)	-.0807 (4.39)
Finland	-.0001 (0.00)	.0014 (0.07)	.0032 (0.16)
Germany	-.2286 (19.35)	-.2297 (19.18)	-.2229 (18.85)
Greece	-.4596 (20.71)	-.4512 (18.89)	-.4485 (20.32)
Ireland	.0524 (3.50)	.0540 (3.61)	.0549 (3.68)
Italy	-.3434 (17.47)	-.3374 (15.85)	-.3306 (16.34)
Netherlands	.1199 (10.55)	.1179 (10.12)	.1181 (10.33)
Norway	.1072 (3.47)	.1064 (3.44)	.1057 (3.42)
Portugal	-.4979 (21.41)	-.4939 (21.13)	-.4973 (21.47)
Spain	-.1240 (7.41)	-.1206 (7.10)	-.1200 (7.14)
Sweden	.1057 (8.12)	.1054 (8.07)	.1054 (8.04)
Constant	3.5198	3.5262	3.5264
N	703,172	703,172	703,172
R ²	.1549	.1549	.1550

Notes: excluded categories UK, employee, no children: left school before age 15; single. All equations include 20 year dummies. Standard errors are clustered by country and year. Average inflation experience refers to the average annual inflation rate experienced by an individual over their life to the survey date. Highest inflation experienced refers to the highest annual inflation rate experienced by an individual over their life to the survey date.

Source: Eurobarometers, 1973-2006 and Blanchflower (2007)

Table 12. WRS applications May 2004 – March 2007, as a proportion of pre-Accession home country populations

	WRS registrations as a percentage of 2004 home country population	WRS registrations (000s)	GDP per head (2005) (Euros per head at 1995 exchanges rates and prices)	Life satisfaction (2002)	Life satisfaction (2006)
Czech Republic	0.28	28.9	5,200 €	2.84	2.92
Estonia	0.47	6.2	4,000 €	2.52	2.74
Hungary	0.19	18.9	5,000 €	2.63	2.50
Latvia	1.43	32.8	3,100 €	2.47	2.62
Lithuania	1.85	62.8	2,500 €	2.46	2.62
Poland	1.02	394.2	4,200 €	2.71	2.80
Slovakia	1.13	61.2	4,200 €	2.54	2.70
Slovenia	0.03	0.6	11,400 €	3.03	3.09
Average/Total	0.83	605.4			
Correlation			-0.711	-0.731	

Source: Blanchflower and Shadforth (2007)

Table 13. Economic, Employment and Life Expectations over next twelve months, 1995-2006

	<i>Economic situation</i>		<i>Employment situation</i>		<i>Life 1 year ahead</i>		<i>Life 5 years ahead</i>	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
France	-.1992 (8.00)	-.1645 (5.65)	.2112 (8.41)	.2532 (8.65)	.5166 (20.17)	.6714 (22.18)	.2419 (7.76)	.3045 (8.99)
Denmark	.2793 (11.31)	.1640 (5.68)	.6710 (26.70)	.4432 (15.09)	.4741 (18.48)	.2439 (8.01)	.5509 (17.42)	.3427 (9.88)
UK	.1664 (7.23)	.0751 (2.80)	.5437 (23.41)	.4223 (15.64)	.8461 (35.52)	.7944 (28.28)	.8284 (28.01)	.7599 (23.68)
Not very satisfied		.5787 (22.91)		.5318 (21.01)		.9013 (34.32)		.8380 (28.38)
Fairly satisfied		1.0971 (44.84)		.9678 (39.53)		1.8423 (72.14)		1.7548 (61.65)
Very satisfied		1.3750 (52.90)		1.2523 (48.21)		2.3265 (85.19)		2.1457 (69.87)
Age	-.0247 (16.31)	-.0177 (10.33)	-.0260 (17.03)	-.0187 (10.89)	-.0454 (29.01)	-.0338 (18.99)	-.0717 (36.07)	-.0623 (29.09)
Age ²	.0002 (12.98)	.0001 (7.84)	.0002 (13.53)	.0001 (8.30)	.0002 (14.87)	.0001 (6.75)	.0004 (19.36)	.0002 (13.11)
Male	.1379 (15.73)	.1347 (13.62)	.0694 (7.86)	.0791 (7.96)	-.0424 (4.68)	-.0443 (4.30)	-.0015 (0.14)	.0119 (1.01)
ALS 16-19	.1058 (9.35)	.0659 (5.13)	.1005 (8.78)	.0713 (5.50)	.2280 (19.58)	.1650 (12.42)	.1279 (9.13)	.0714 (4.77)
ALS 20+	.2684 (20.75)	.1946 (13.26)	.2560 (19.61)	.1970 (13.31)	.4439 (33.20)	.3216 (21.07)	.3521 (21.82)	.2552 (14.80)
Still studying	-.1670 (2.25)	-.1396 (1.85)	-.0469 (0.63)	-.0399 (0.53)	.0261 (0.34)	.0510 (0.66)	-.1002 (1.20)	-.0596 (0.71)
Homemaker	-.0354 (1.93)	.0066 (0.32)	-.0279 (1.51)	.0150 (0.72)	-.1102 (5.83)	-.0677 (3.14)	-.1406 (6.12)	-.1088 (4.44)
Student	.4141 (5.51)	.3224 (4.20)	.2681 (3.53)	.2118 (2.75)	.2025 (2.62)	.0340 (0.43)	.2356 (2.75)	.0247 (0.29)
Unemployed	-.1722 (8.46)	-.0428 (1.85)	-.1666 (8.14)	-.0600 (2.58)	-.0674 (3.15)	.1738 (7.08)	-.3499 (13.55)	-.1498 (5.39)
Retired	-.0892 (5.14)	-.0679 (3.47)	-.0604 (3.43)	-.0479 (2.43)	-.2201 (12.24)	-.2062 (10.16)	-.2226 (10.02)	-.1828 (7.69)
Farmer	-.2591 (7.36)	-.2083 (5.22)	-.1874 (5.37)	-.1856 (4.68)	-.4208 (11.53)	-.3427 (8.32)	-.4239 (9.59)	-.3726 (7.98)
Fisherman	-.0987 (0.50)	-.1320 (0.60)	.2000 (1.02)	.1952 (0.90)	-.0221 (0.11)	-.0260 (0.11)	-.5545 (2.20)	-.5713 (2.13)
Professional	.1447 (4.13)	.1020 (2.58)	.0805 (2.30)	.0583 (1.47)	.3413 (9.34)	.2896 (6.94)	.2365 (5.29)	.2137 (4.50)
Shopkeeper	-.0329 (1.32)	-.0171 (0.60)	-.0257 (1.04)	-.0108 (0.38)	.0779 (3.02)	.0862 (2.90)	.0178 (0.56)	-.0094 (0.28)
Business proprietor	.0375 (1.13)	.0121 (0.32)	.0143 (0.43)	-.0043 (0.12)	.3133 (9.04)	.2671 (6.78)	.2642 (6.18)	.2180 (4.77)
Empd. professional	.1083 (3.66)	.0569 (1.75)	.1120 (3.78)	.0803 (2.47)	.2223 (7.12)	.1355 (3.92)	.2264 (5.85)	.1480 (3.64)
General mgmt	.1640 (4.31)	.1272 (2.92)	.1348 (3.51)	.0950 (2.17)	.2302 (5.85)	.1340 (2.95)	.3875 (7.83)	.3203 (6.07)
Desk employee	.0631 (3.40)	.0663 (3.15)	.0472 (2.54)	.0503 (2.39)	.0721 (3.74)	.0536 (2.44)	.0458 (1.94)	.0284 (1.13)
Traveling worker	.0258 (0.96)	.0252 (0.83)	-.0047 (0.18)	-.0063 (0.21)	.1356 (4.84)	.1436 (4.50)	.0370 (1.07)	.0235 (0.64)
Service workers	-.0422 (2.18)	-.0454 (2.07)	-.0335 (1.72)	-.0383 (1.74)	.0488 (2.42)	.0534 (2.32)	.0243 (0.98)	.0095 (0.36)
Supervisor	-.1080 (2.59)	-.0957 (1.98)	-.0244 (0.59)	.0026 (0.06)	-.0648 (1.50)	-.0641 (1.28)	.0066 (0.13)	-.0130 (0.23)
Skilled manual	-.0704 (3.86)	-.0574 (2.78)	-.0369 (2.02)	-.0160 (0.78)	-.0719 (3.79)	-.0351 (1.63)	-.1154 (4.98)	-.0992 (4.01)
Married	-.0438 (3.42)	-.1087 (7.41)	-.0465 (3.62)	-.1111 (7.57)	-.2285 (17.11)	-.3427 (22.26)	.0059 (0.36)	-.0794 (4.41)
Living as married	-.0218 (1.30)	-.0485 (2.56)	.0154 (0.92)	-.0127 (0.67)	.0913 (5.17)	.0524 (2.61)	.2435 (10.99)	.2207 (9.25)
Divorced	-.1214 (5.98)	-.0807 (3.53)	-.0892 (4.37)	-.0520 (2.27)	-.0604 (2.86)	.0105 (0.44)	-.0211 (0.82)	.0410 (1.48)
Separated	-.0785 (2.26)	-.0024 (0.06)	-.0433 (1.24)	.0001 (0.00)	.0380 (1.04)	.1202 (2.91)	.0253 (0.57)	.0852 (1.80)
Widowed	-.0348 (1.77)	-.0266 (1.20)	-.0451 (2.26)	-.0462 (2.06)	-.2552 (12.59)	-.2605 (11.35)	-.0426 (1.74)	-.0044 (0.17)
Belgium	-.3270 (13.12)	-.3317 (11.44)	-.1187 (4.68)	-.1595 (5.43)	.2593 (10.15)	.2989 (9.93)	.1800 (5.80)	.1593 (4.74)
Bulgaria	.2122 (5.88)	.6864 (17.75)	.6647 (18.04)	1.0273 (26.01)	-.3157 (8.37)	.5173 (12.75)	-.4646 (10.36)	.4203 (8.82)
Croatia	-.1509 (4.19)	-.0566 (1.49)	.1982 (5.45)	.2246 (5.88)	.0765 (2.02)	.3013 (7.54)	.1426 (3.22)	.4676 (10.13)

Cyprus	-.8493 (16.54)	-.9129 (17.29)	-.3879 (7.66)	-.5087 (9.77)	.2896 (5.70)	.2481 (4.72)	1.0663 (16.89)	1.3438 (20.56)
Czech	.1033 (3.02)	.1450 (4.03)	.3946 (11.57)	.3714 (10.34)	-.0144 (0.40)	.0914 (2.41)	.1454 (3.49)	.0384 (0.89)
East Germany	-.5925 (22.24)	-.5337 (16.83)	-.6807 (24.45)	-.6763 (20.46)	-.2950 (11.00)	-.1412 (4.39)	-.4160 (12.80)	-.2058 (5.79)
Estonia	1.1382 (31.82)	1.2831 (34.11)	1.2997 (35.81)	1.3702 (35.92)	.6421 (17.21)	.9339 (23.53)	.8317 (18.25)	1.2139 (25.58)
Finland	.4106 (16.93)	.2582 (9.17)	.6297 (25.52)	.4264 (14.87)	.6797 (26.72)	.5604 (18.76)	.4954 (15.92)	.4136 (12.26)
Greece	-.5529 (21.75)	-.5137 (17.23)	-.3399 (13.19)	-.3586 (11.89)	.0693 (2.64)	.3453 (11.20)	.0956 (2.97)	.2697 (7.71)
Hungary	.1444 (4.07)	.3748 (10.02)	.3728 (10.49)	.5062 (13.51)	.0314 (0.84)	.4611 (11.65)	.1077 (2.49)	.6243 (13.78)
Ireland	.6633 (26.36)	.5098 (17.30)	.9641 (38.02)	.7708 (26.02)	.8581 (33.18)	.7793 (25.53)	1.0534 (32.12)	.9904 (27.92)
Italy	-.0966 (3.85)	-.0024 (0.09)	.2124 (8.36)	.2693 (9.13)	.7019 (27.05)	.7908 (25.84)	.4969 (15.59)	.6210 (17.96)
Latvia	.3341 (9.48)	.5381 (14.48)	.9425 (26.76)	1.0672 (28.71)	.4124 (11.13)	.8205 (20.80)	.4771 (10.86)	.9836 (21.31)
Lithuania	.7039 (19.56)	.9195 (24.23)	1.4142 (38.46)	1.5498 (39.97)	.3486 (9.22)	.7629 (18.98)	.3308 (7.40)	.8426 (17.98)
Luxembourg	-.0392 (1.33)	-.1869 (5.36)	-.1065 (3.50)	-.2719 (7.57)	.3717 (12.26)	.2367 (6.50)	.4776 (13.07)	.3217 (8.07)
Malta	-.2176 (4.20)	-.2520 (4.74)	.1570 (3.04)	.0601 (1.14)	.3609 (6.87)	.3433 (6.35)	.5864 (9.66)	.6571 (10.61)
Netherlands	-.1666 (6.71)	-.3647 (12.52)	.2334 (9.30)	-.0006 (0.02)	.2141 (8.43)	.0308 (1.03)	.3388 (10.93)	.2403 (7.13)
Poland	.2184 (6.00)	.3241 (8.47)	.5216 (14.56)	.5540 (14.68)	.2721 (7.16)	.5026 (12.47)	-.1493 (3.37)	.1291 (2.80)
Portugal	-.4662 (18.09)	-.4349 (14.29)	-.3092 (11.79)	-.2527 (8.23)	-.2748 (10.36)	-.0419 (1.34)	.5516 (17.01)	.8370 (23.60)
Romania	.5398 (14.11)	.8658 (21.55)	.4709 (12.23)	.6939 (17.12)	.4295 (10.78)	1.0253 (24.31)	.6149 (13.07)	1.2583 (25.48)
Slovakia	-.1874 (5.36)	-.0076 (0.21)	.4146 (11.92)	.5137 (13.99)	-.1950 (5.36)	.1520 (3.95)	.0773 (1.32)	.1372 (2.29)
Slovenia	.0386 (1.08)	-.0115 (0.31)	.0443 (1.23)	-.0643 (1.71)	.1894 (5.15)	.1585 (4.08)	-.2430 (5.85)	.1741 (4.01)
Spain	.4554 (18.19)	.3578 (12.21)	.6354 (25.07)	.4992 (16.82)	.7092 (27.37)	.7410 (24.22)	.1905 (4.46)	.2488 (5.63)
Sweden	.3511 (14.17)	.2350 (8.14)	.5797 (23.18)	.4554 (15.64)	.9136 (35.52)	.7816 (25.80)	.8418 (26.37)	.8604 (24.84)
Turkey	.8676 (21.72)	.9566 (23.01)	.8859 (22.43)	.9024 (21.91)	.6698 (15.84)	.8543 (19.30)	.7608 (23.91)	.6430 (18.59)
Turkish Cyprus	1.2484 (24.82)	1.3015 (25.14)	1.3926 (27.75)	1.3765 (26.64)	1.0391 (19.32)	1.1983 (21.32)	.2221 (4.66)	.5001 (10.12)
West Germany	-.2751 (11.14)	-.2565 (8.93)	-.1166 (4.62)	-.1199 (4.09)	-.1441 (5.72)	-.0879 (2.97)	-.3021 (9.94)	-.2264 (6.88)
cut1	-.4833	.5491	-.1550	.7494	-2.3905	-.6778	-3.7664	-2.0448
cut2	1.3971	2.4703	1.5584	2.4985	.4734	2.3522	-1.4665	.35400
N	225,315	179,205	224,578	178,295	232,551	184,890	155,518	139,559
Pseudo R ²	.0535	.0489	.0440	.0537	.0711	.1059	.0958	.1225

Notes: excluded categories: middle manager; single and ALS<16. T-statistics in parentheses. Ordered logits. Equations also include year dummies. Source for columns 1-6: Eurobarometers #65.2 (2006); #64.2 (2005); #63.4 (2005); #62.0 (2004); #61.0 (2004)*; #60.1 (2003); #58.1 (2002); #56.2 (2001); #54.1 (2000); #52.0 (1999); #50.0 (1998)*; #48.0 (1997); #46.0 (1996)* and #44.1 (1995)*. For columns 7 & 8 Eurobarometers #65.2 (2006); #63.4 (2005); #62.0 (2004); #61.0 (2004)*; #57.1 (2002); #55.1 (2001); #53.0 (2000); and #47.1 (1997). *means does not include life satisfaction data in the survey.

Table 14. Expectations twelve months ahead - UK

	Your life in general	Economic situation	Employment situation	<u>Annual pp changes in</u>		<u>Economic situation</u>	
				Unemployment	Inflation	GfK	MORI
1995	38	25	21	-1.0	0.6	-6.9	-17.5
1996	42	25	27	-0.5	-0.1	-3.6	-6.9
1997	39	29	33	-1.1	-0.7	8.3	7.3
1998	39	21	23	-0.9	-0.2	-6.9	-17.0
1999	36	25	31	-0.2	-0.3	-4.4	-5.3
2000	41	24	28	-0.5	-0.5	-10.8	-9.2
2001	46	21	23	-0.7	0.4	-14.8	-22.2
2002	46	16	19	0.3	0.1	-8.1	-22.8
2003	49	17	20	-0.2	0.1	-18.4	-28.3
2004	44	18	20	-0.2	-0.1	-12.9	-21.8
2005	44	18	20	-0.1	0.8	-11.8	-20.6
2006	43	21	21	0.7	0.2	-17.9	-28.3

Source: columns 1-3 as in Table 2. Columns 4 and 5 ONS. Columns 6 and 7, MORI General Economic Optimism Index (www.IPSOS-MORI.com – economic optimism over the next 12 months), Gfk NOP Consumer Confidence Survey (Q4. How do you think the general economic situation in this country will develop over the next 12 months?)

Figure 1. Average Happiness and Real GDP per Capita for repeated cross-sections of Americans.

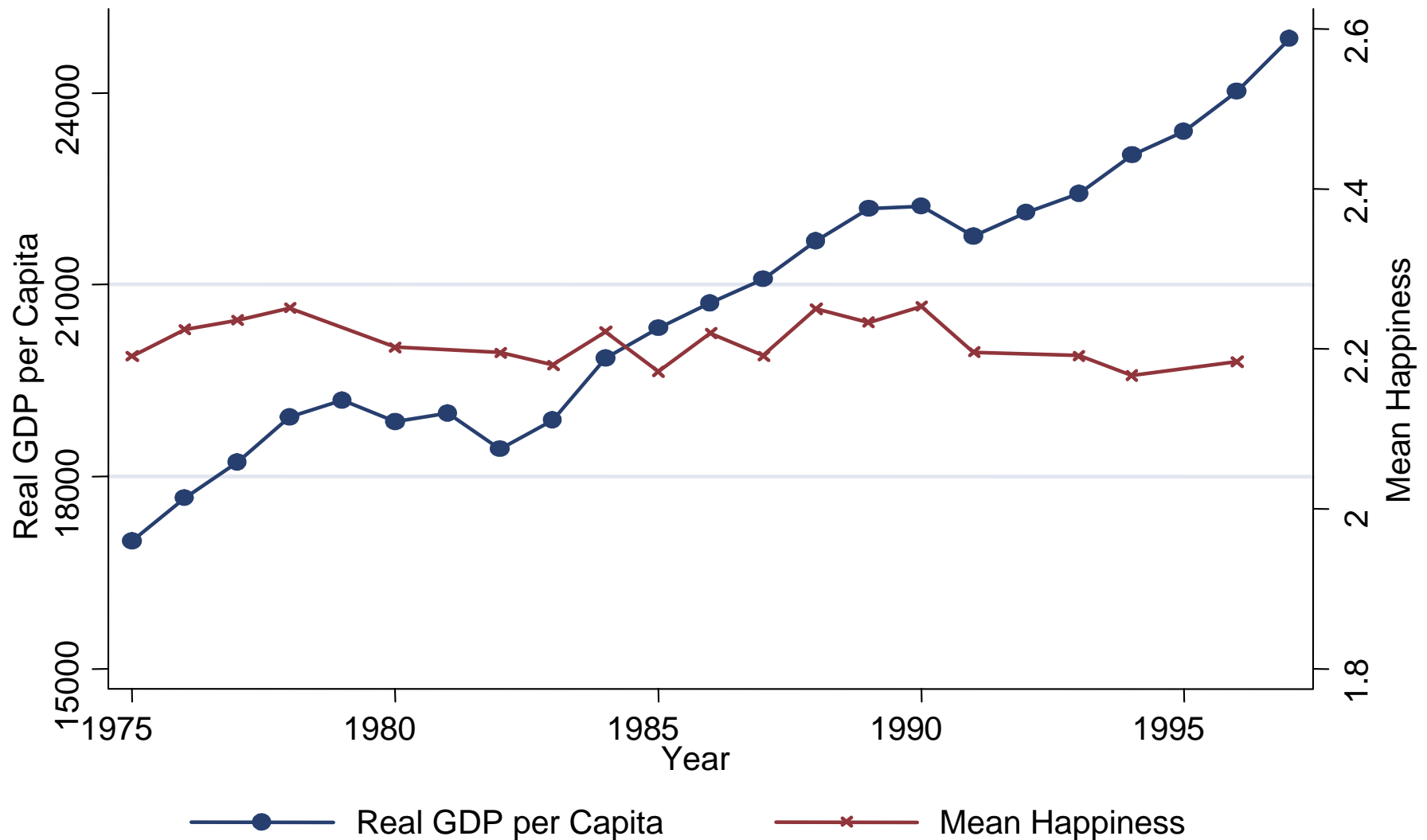


Figure 2a. Mean Life Satisfaction scores, 1973-2006

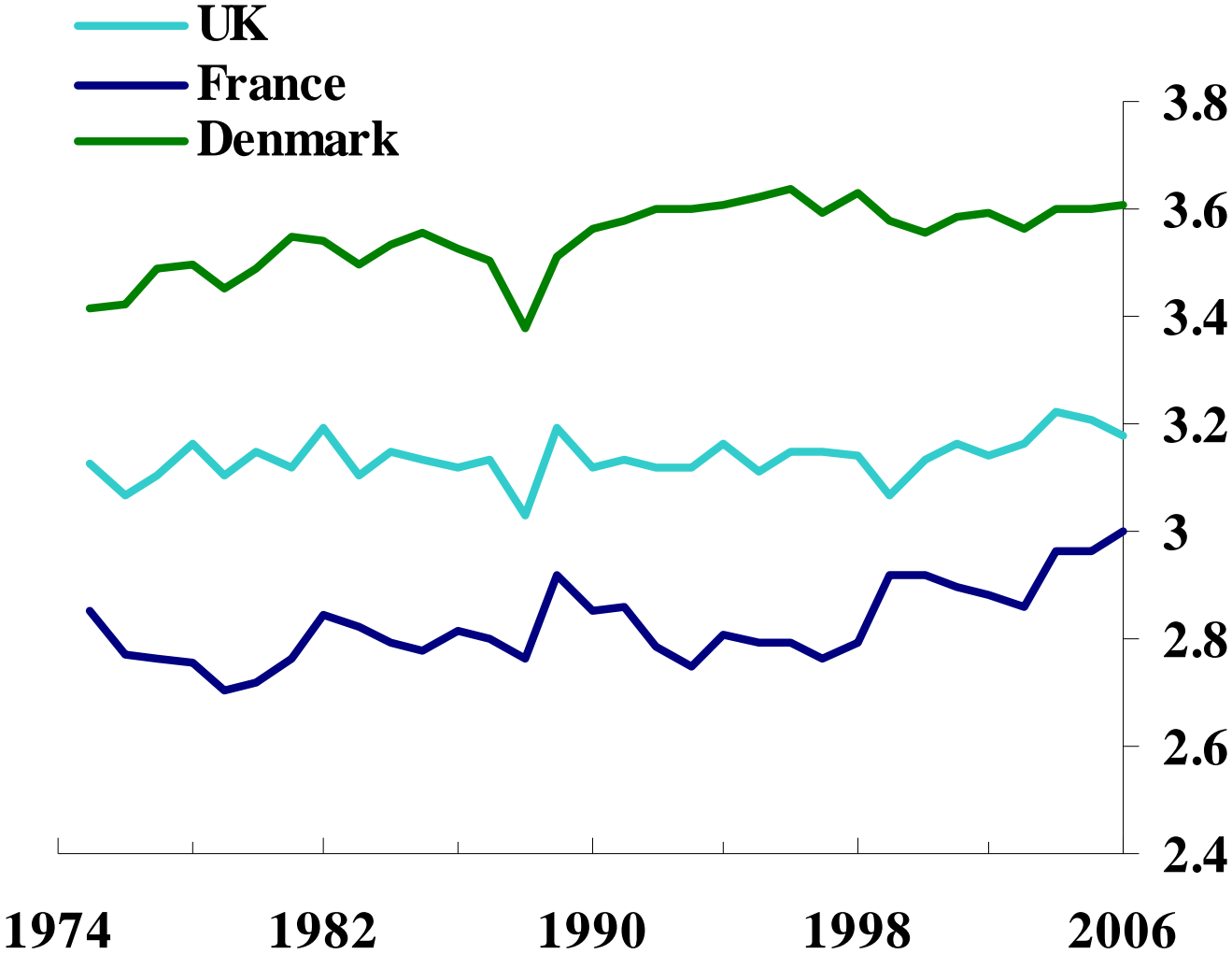


Figure 2b. Mean Life Satisfaction scores, 1973-2006

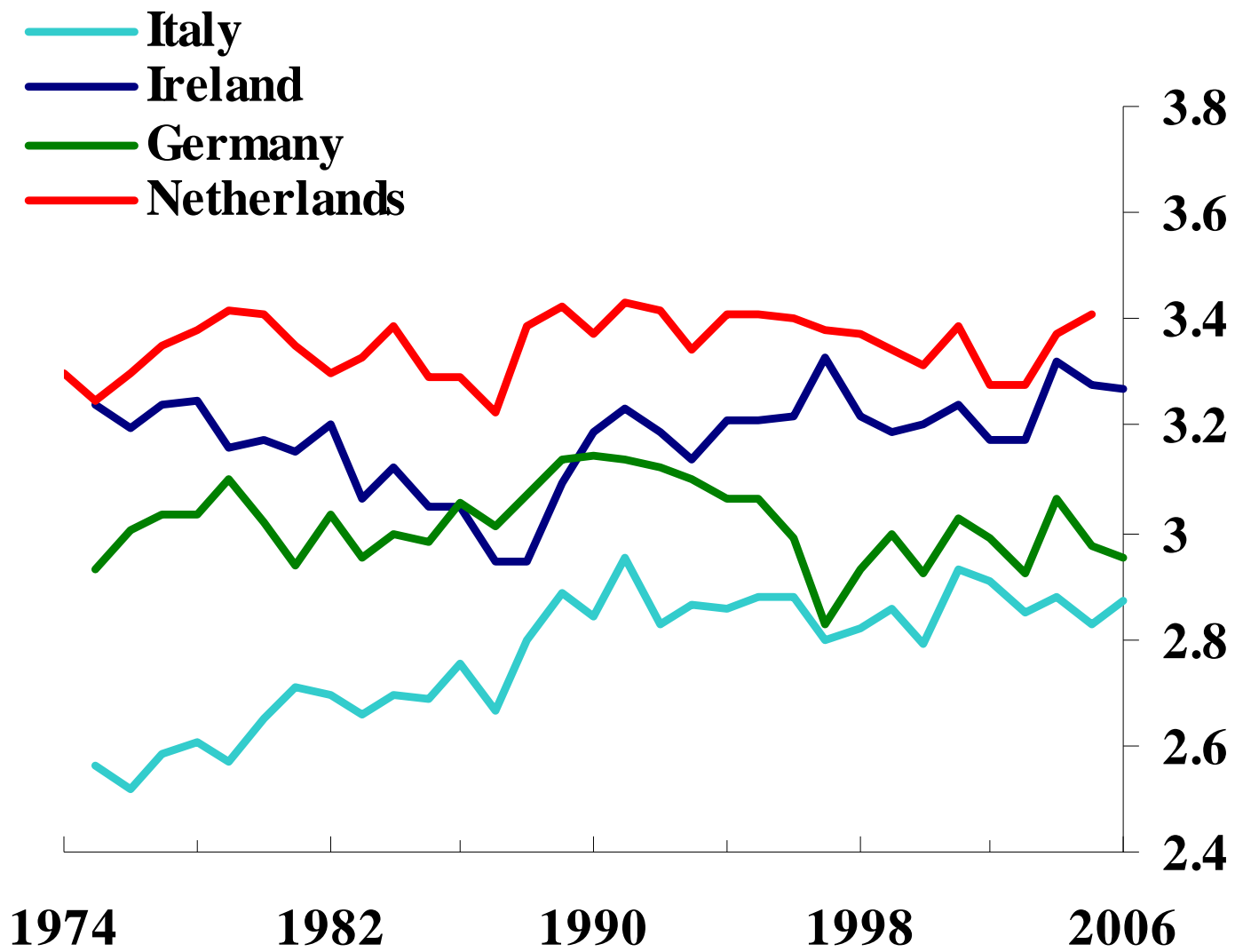


Figure 3. Life satisfaction and Unemployment rate (2003)

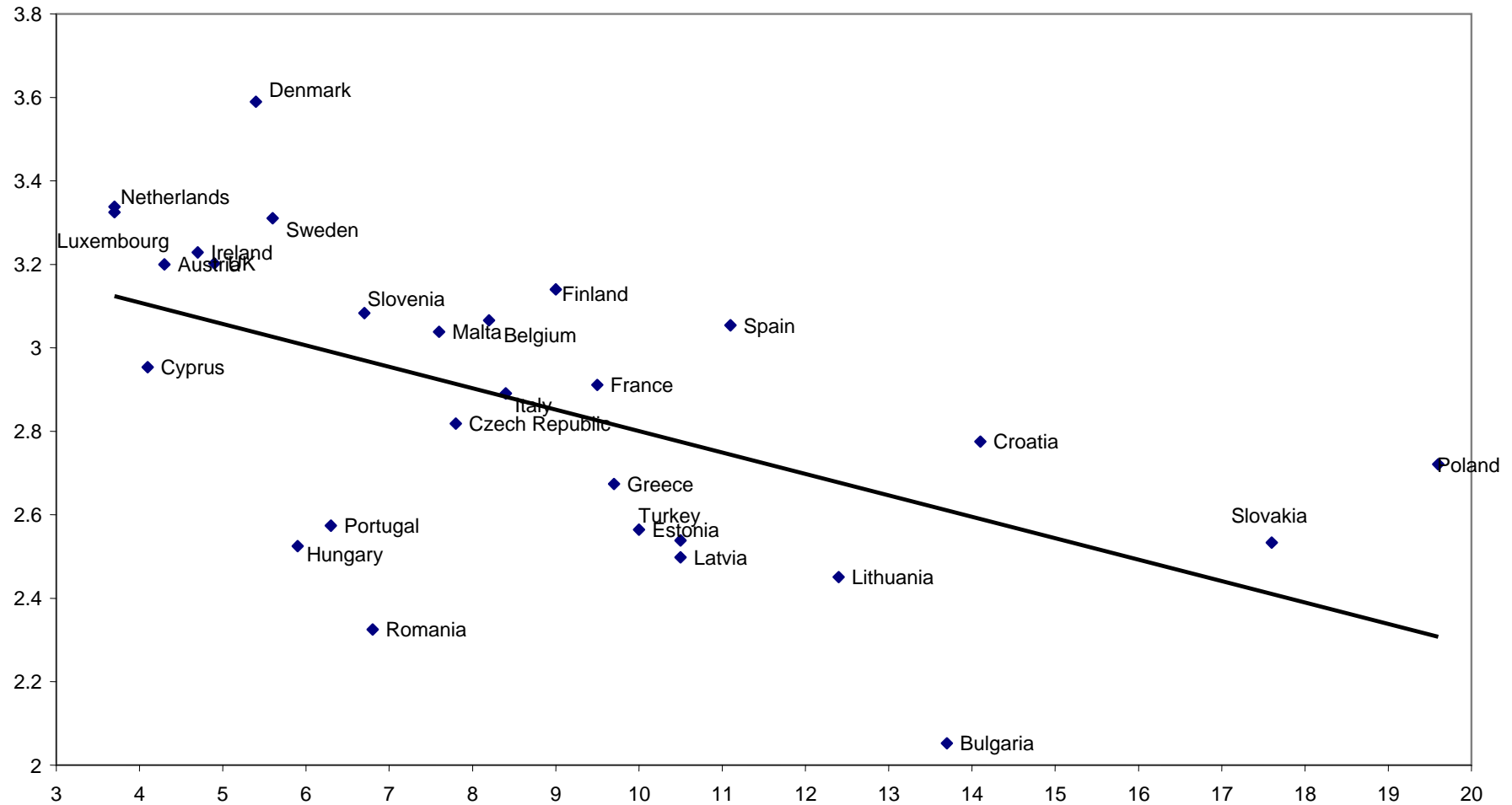


Figure 4: Life Satisfaction and Inflation (HICP, 12 month average, December 2003)

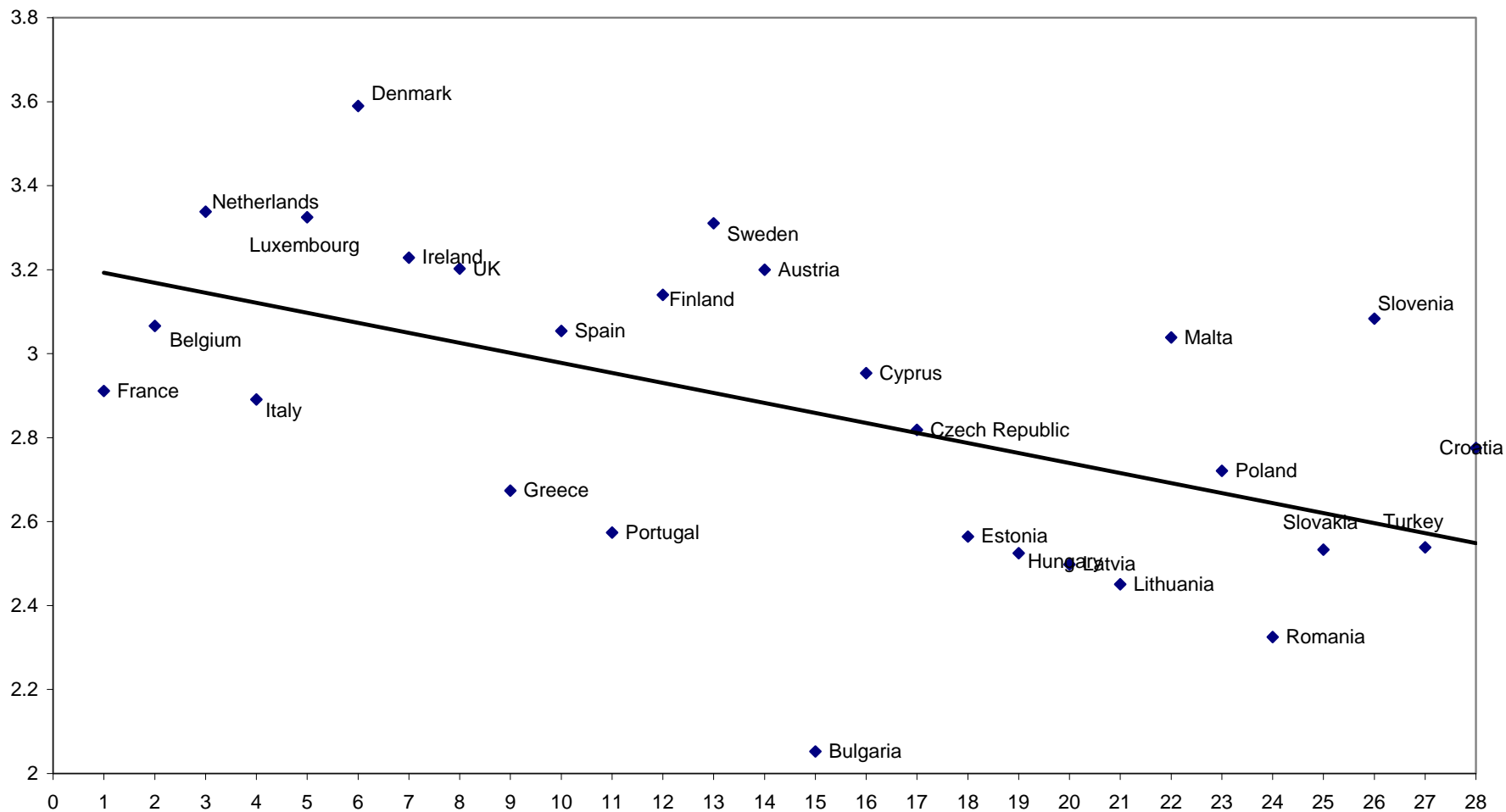


Figure 6: 1995/2000 World Values Survey results

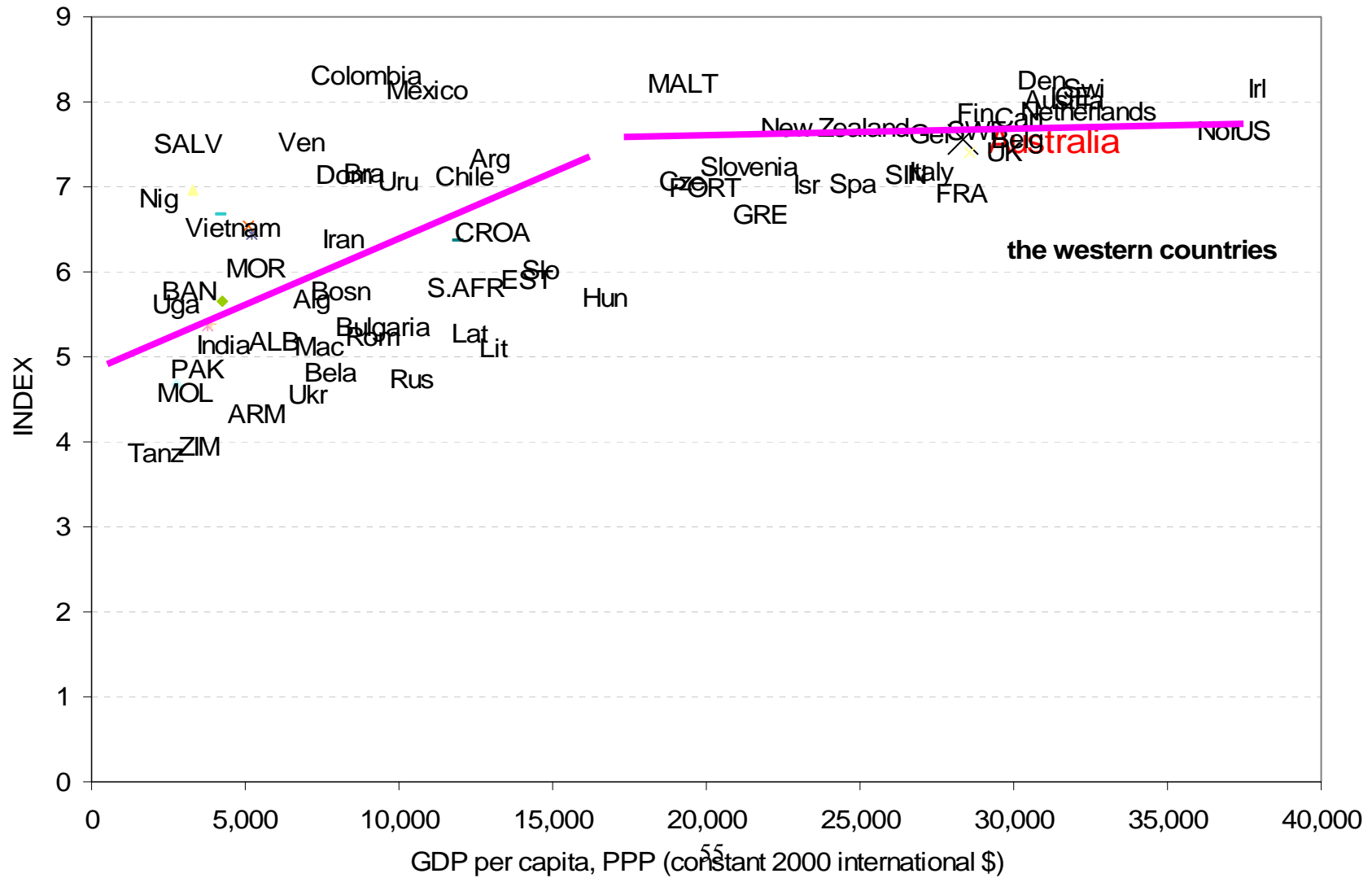


Figure 7a: Proportion of UK Eurobarometer respondents saying the economic situation in 12 months will improve (inverted) and the change in unemployment and inflation rates.

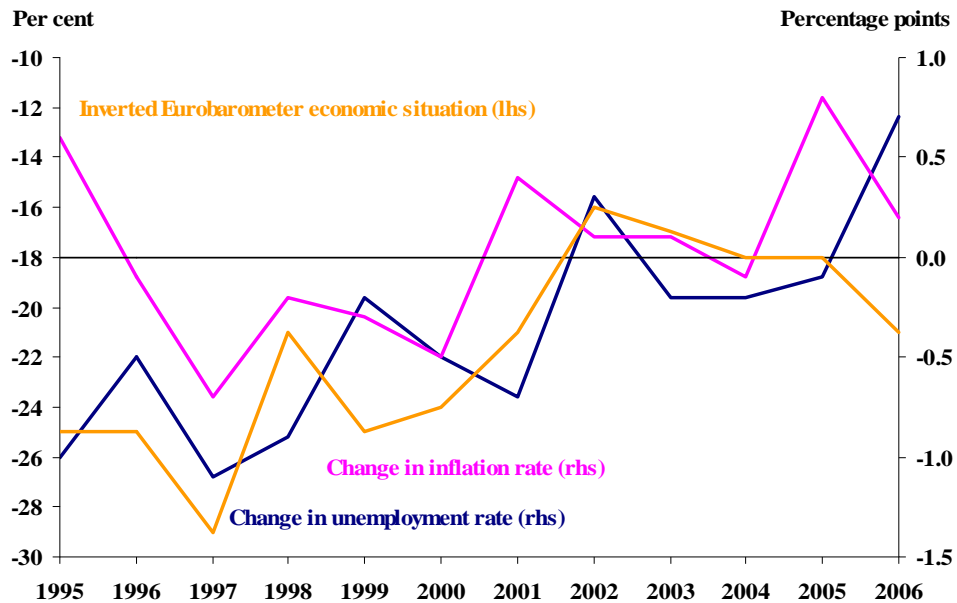
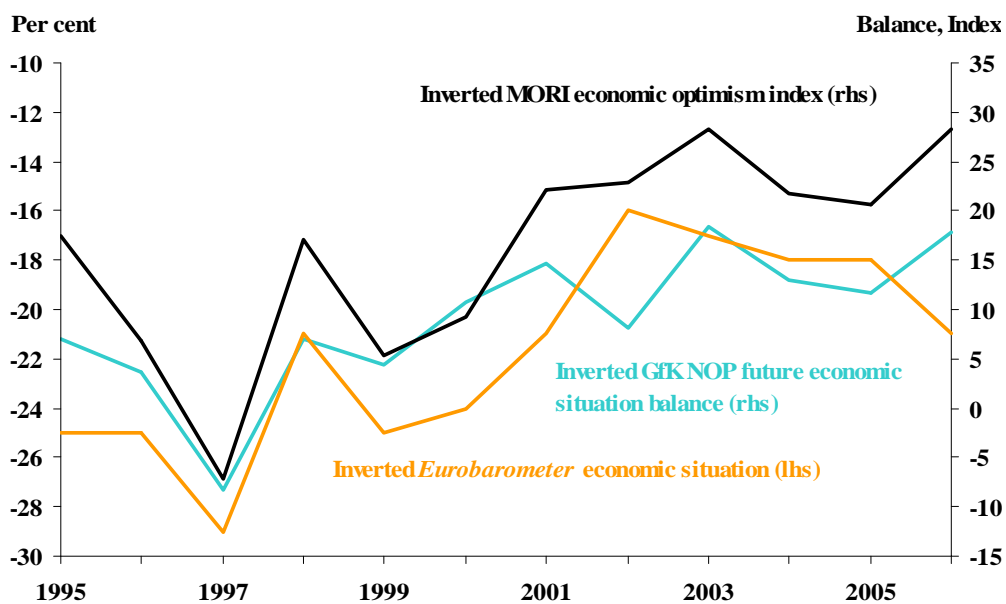


Figure 7b: Proportion of UK Eurobarometer respondents saying the economic situation in 12 months will improve (inverted) compared with other measures of economic confidence



Source: Eurobarometers 1995-2006, MORI General Economic Optimism Index (www.IPSOS-MORI.com – economic optimism over the next 12 months), GfK NOP Consumer Confidence Survey (Q4. How do you think the general economic situation in this country will develop over the next 12 months?)