

For richer and for poorer: well-being in Europe before and during crisis

Sujarwoto and Gindo Tampubolon

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Abstract

The 2007 European financial crisis causes detrimental effects on its citizens' well-being. We investigate these effects by comparing two well-being measures i.e. happiness and life satisfaction across European countries before and during the crisis. The European Value Study (EVS) 1999 and 2008 are used to examine these two different economic contexts and we apply multivariate multilevel model to study the effects of the crisis on happiness and life satisfaction simultaneously. The impacts of the crisis on well-being are far from uniform across countries in this area. The decline of well-being appears in several countries in Western Europe and Nordic countries, whereas in Eastern Europe the crisis has less effect on well-being. The larger impacts of the crisis affect more the vulnerable groups, including those with less income, unemployed, and older people. Companionships and social capital are important buffers to maintain well-being during the disruptive economic circumstances in Europe.

Keywords: well-being, happiness, life satisfaction, financial crisis, multivariate multilevel model.

1 Introduction

A mere decade separates the times of plenty from the times of crisis. After several decades of substantial economic growth with macroeconomic stability, European society and economy were severely disrupted by the 2007 financial crisis. The crisis was marked by the collapse of the Northern Rock bank and Landesbank Sachsen in England and Germany in the summer of 2007. It hit the deepest bottom in the following year with the collapse of the Lehman Brothers investment bank recognized as the major US bank with sizeable operations in all centres of finance in London, Frankfurt, and Tokyo. Within a decade (1999-2008), economic growth in Europe declined sharply from 3% to 0.7%. Price spiraled up across Europe with inflation reaching 4% in June 2008 (Europe Commission 2009). Unemployment rate soared by more than 2% that year following thousands of people losing their jobs. Little doubt that all these circumstances can cause detrimental effect on citizens' well-being.

This study aims to investigate the effect of the current crisis in Europe on its citizens' well-being by comparing its measures and their determinants with those before the crisis. The European Value Study (EVS) 1999 and 2008 are uniquely suitable for this purpose since they provide rich information about Europeans' well-being in both periods. We use both happiness and life satisfaction to measure well-being. Lane (2000, :275) writes that both measures of well-being are correlated but explain somewhat different concepts. Happiness reflects affective component of well-being, whereas life satisfaction reflects its cognitive component. To capture the relation between both measures in the European countries, we propose multilevel multivariate model which takes into account *country* effects on its *citizens'* well-being (multilevel) and treat happiness and life satisfaction simultaneously as two dependent variables (multivariate).

The results show that the impacts of the current financial crisis in Europe on well-being are far from uniform. A decline in well-being is apparent during the crisis in Germany, Portugal, Austria, Northern Ireland, and Finland. In contrast, the crisis affects less markedly the well-being of people in France, Spain, Denmark, Netherlands, Belgium and Luxemburg. We find a slight increase in well-being in these countries. Inequality of well-being between Nordic Europe and Eastern Europe is evident in both periods though there is an increase in well-being in most Eastern European countries. Those who have less income, unemployed, and older people are less likely to be happy and satisfied with their life. Notably, companionships and social capital are important buffer to maintain well-being during the crisis. Marriage or in union, family, friendship, trust, and social networks are positively associated with increase in well-being among Europeans in both periods.

In the next section, we review well-being literature to look for the determinants of happiness and life satisfaction. Section 3 presents data and proposes multivariate multilevel model used in the analysis. Section 4 and 5 presents results of this study. Finally, we discuss and conclude our results in section 6.

2 Well-being and its determinants

Well-being has received renewed attention among social scientists recently (Lane 2000; Diener and Seligman 2004; Frey and Stutzer 2002; Kahneman et al. 2004; Deaton 2008; Graham 2009). Among social scientists, the limitation of gross domestic products as a measure of welfare are increasingly recognised. Fleurbaey (2009) surveys the literature on alternative measures and concludes that a three-fold alternative is possible. Chief among these three is well-being (happiness and life satisfaction) which are our focus in this study.

Scholars emphasise that happiness and life satisfaction are correlated though both capture somewhat different concept. Frey and Stutzer (2002, :26), for instance, explain that “happiness has been shown to reflect to a large extent affective components of wellbeing that involve positive emotional aspects. In contrast, measures of satisfaction reflect relatively more aspects of the cognitive component”. Campbel et al. (1976, :8) suggest that “satisfaction is a judgmental or cognitive experience, whereas happiness suggests an experience or feeling of affect”. Similarly, Lane (2000, :275) points out that “happiness is a mood, satisfaction with life is a more cognitive judgement. Happiness is more related to affect whereas satisfaction is more evaluative” (Stevenson and Wolfers 2008, :7). Because they are closely, but not perfectly, related our measures of well-being include both. We expect thus that they are positively correlated in our estimation.

The literature on well-being is vast and growing vigorously, hence our review is necessarily selective and utilitarian (Lane 2000, Oswald and Clark 1994; Frey and Stutzer 2002; Stevenson and Wolfers 2008; Blanchflower and Oswald 2008; Graham 2009). Looking at demographic determinants, age and gender are among the main determinants which are often used to predict well-being. Previous studies identify a U-shaped relationship between age and well-being, suggesting that people are happier and more satisfied with their life when they are younger as well as when they are older (Clark, 2003; Oswald, 1997; Blanchflower and Oswald 2008; Ferrer-i-Carbonell and Gowdy 2005). Researchers find inconsistent evidence on the relation between gender and well-being. They find that females tend to report slightly higher well-being than males (Frey and Stutzer 2002; Gertham and Johanneson, 2001; Oswald 2008; Graham 2009). Nevertheless, there have been several studies that report no gender differences (Louis and Zhao 2002) and it has also been argued that the difference tended to disappear in recent decades (Frey and Stutzer 2002).

Previous studies use employment, income, and education as important socio-economic determinants to explain well-being (Clark and Oswald 1994; Clark 2003; Easterlin 1974; Diener et al. 1993, 1999; Clark 2003; Stutzer 2004). Unemployment is a very strong and consistent determinant of unhappiness (Clark and Oswald 1994; Clark 2003). Being unemployed has severe and long lasting negative impacts on happiness, and these cannot be explained solely in terms of loss of income. There are significant non-pecuniary effects as well (Clark and Oswald 1994; Clark 2003; Theosiou 1998). In contrast with findings on unemployment, most studies find weak relationships between absolute income and well-being both at individual and country level (Easterlin 1974; Diener et al. 1999; Clark 2003). Easterlin (1974; 1995; 2003) find an income paradox of well-being within and across countries. Using time series studies of the US, nine European countries, and Japan, he finds that “raising the incomes of all does not increase the happiness of all” (Easterlin 1995, :4). A number of studies have also investigated the relation between education and well-being and suggested it to be positive (Diener et al. 1993; Stutzer 2004). In contrast, there are a number of studies which find a negative relation between education and well-being (Clark and Oswald 1996), suggesting the changing aspirations and the creation of expectation for a higher income among more educated people.

Companionships and social relation are determinants which are consistently associated with well-being. Empirical studies within and across countries repeat the same result that family solidarity and friendship are strong predictors of well-being (Lane 2002; Frey and Stutzer 2002; Helliwel 2003; Myers 1999; Clark and Oswald 2002; Diener and Seligman 2002; Graham 2009). Clark and Oswald (2002) find that getting married has a very high positive impact, whereas being widowed and getting divorced are detrimental to well-being. There is also evidence that stable and secure intimate relationships are beneficial for well-being

and, in contrast, the dissolution of such relationships is damaging (Myers 1999). The importance of friendships are highlighted by studies which find that this determinant is often strongly correlated with well-being (Burt 1987; Diener and Seligman 2002; Layard 2005). Studies of depression over time also show that when a person's loneliness is relieved, the depression is also relieved. People are in more positive mood when with friends compared to when being alone (Lane 2000). There are also studies of the impact of social capital upon well-being that highlight the role of trust, norms, and social networks in enhancing well-being (Keyes 1998; Putnam 2000).

In summary, empirical evidence based on cross-sectional data has generally revealed some important demographic, socio-economic, and contextual determinants which affect well-being. However, whether or not the relationship change due to the disruptive economic circumstances such as the current financial crisis in Europe remains largely unexplored. Against this background, the EVS 1999 and 2008 are deemed suitable for investigating well-being and its determinants in a cross-country comparative context as well as across contrasting economic circumstances.

3 Data and method

3.1 The European Value Study

Our empirical analyses are based on data from the European Value Study (EVS) 1999 and 2008. The EVS 1999 and 2008 are uniquely suitable for this study since the studies provide rich information about Europeans' well-being in both times of plenty and crisis. The EVS were designed to document the changing social attitudes, beliefs and behaviour across Europe. Data are collected using

face-to-face interviews lasting approximately one hour. The questionnaire consists of a core module, covering standard socio-demographic characteristics, social and moral values, attitudes toward religion, politics and society (GESIS 2008). One of the welcome features of the EVS is the high degree of comparability in the data collected across nations coupled with a high response rate in all participating countries. The samples are representative of eligible residential population in each country aged 15 or older who reside in private households, regardless of nationality and citizenship or language. In total, 39,939 respondents in 32 countries were interviewed in 1999, while total respondents in 2008 were 56,210 in 39 countries (GESIS 2008).

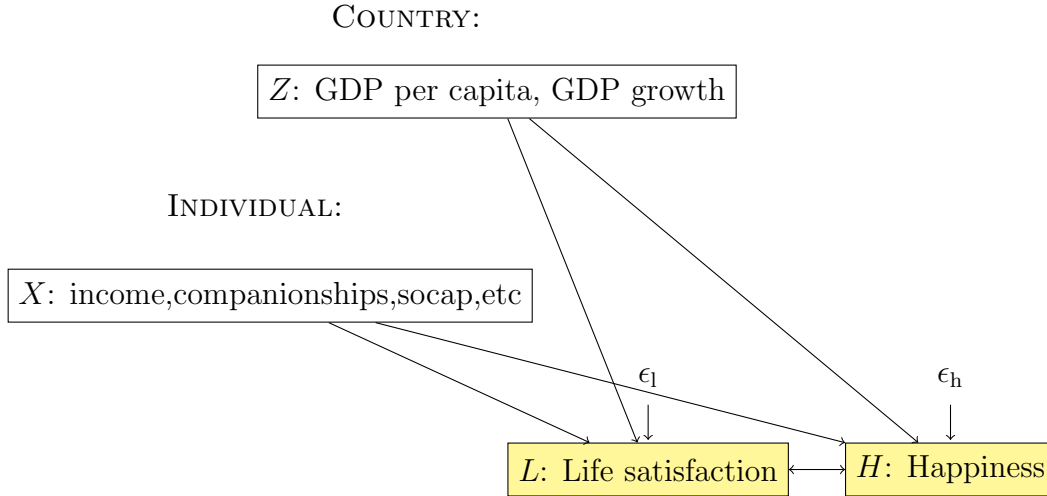
3.2 Multilevel multivariate model

As discussed, happiness and life satisfaction are two dimensions of well-being. Happiness is more related to affective component of well-being whereas life satisfaction is more related to cognitive component (Campbel et al. 1976,:8; Lane 2000,:275; Frey and Stutzer 2002,:26). Even so, many researchers studying well-being often use both measures interchangeably and presuppose them to be synonymous (see for example Easterlin 1974, 1995, 2003; Mastekaasa and Moum 1984; Veenhoven 1991; Graham 2009). Recent evidence (e.g. Gundelach and Kreiner, 2004) reinforces Michalo’s view that although happiness and life satisfaction form parts of well-being construct, it is useful to treat them separately. Thus, we decide to model both happiness and life satisfaction simultaneously as multivariate responses.

We use multilevel model where individuals are found at level one and countries are found at level two since individuals are nested within countries. This model corresponds to a conceptual schema as presented in Figure 1 where in-

dividuals outcomes such as well-being is explained both by individual determinants (i.e. age, female, married or in union, education, unemployment, income, companionship and social capital) and by country determinants (i.e. degrees of economic development). Country's degree of economic development is commonly measured using log gross domestic product. But unobserved country determinants such as degrees of social insurance is more difficult to sum up. When different individuals in two European countries lost their job, there are different degree or types of insurance that protects them. An exogeneous shock that is profound and widespread such as the current crisis may activate various types and degrees of social insurance available across countries in Europe. We do not have measures for these insurance for all these countries. Worse, comparable measures across country and across time are not readily available. To deal with this situation of unobserved country variations, we include random intercepts corresponding to unobserved country variations in this two level model in both periods. This is a standard motivation for using multilevel model in large numbers of European cross-country comparative studies using the EVS and ESS (Veenhoven 1993, 2000; Hayo and Seifer 2003; Senik 2008; Caporale et al. 2009). Although we follow the majority of studies on European comparative studies in using multilevel model, unlike most of these studies we simultaneously explain multivariate response, hence our use of multivariate multilevel model.

Figure 1: Multilevel multivariate model of well-being



Happiness and life satisfaction are both dependent variables in our estimations. In the survey, both variables are elicited with different questions. Happiness is elicited with a question: “Taking all things together, would you say you are: very happy, quite happy, not very happy, not at all happy? Life satisfaction is asked with a question: “All things considered, how satisfied are you with your life as a whole these days?” Respondents are asked to imagine a ladder from 1 to 10 with each rung representing a better life. Following Oswald and Blanchflowers (2004), we take happiness and life satisfaction as continuous-scaled. We also took happiness as ordinal-scaled (see Appendix 2) and found similar results so we focus on continuous measures.

As suggested in the literature, we include several demographic, socio-economic, and contextual determinants of well-being. These determinants include age, gender(female), income, education, unemployment, number of children, companionships, and social capital at the individual level.

Income is measured by monthly household income. The measure is standardised across country using purchasing power parity. Since respondents are nested

within country, we also include GDP growth and GDP per capita to control for whether respondents' well-being across Europe differs according to the level of economic development. GDP growth and GDP per capita data are taken from the World Development Indicators 1999 and 2008 from the World Bank.

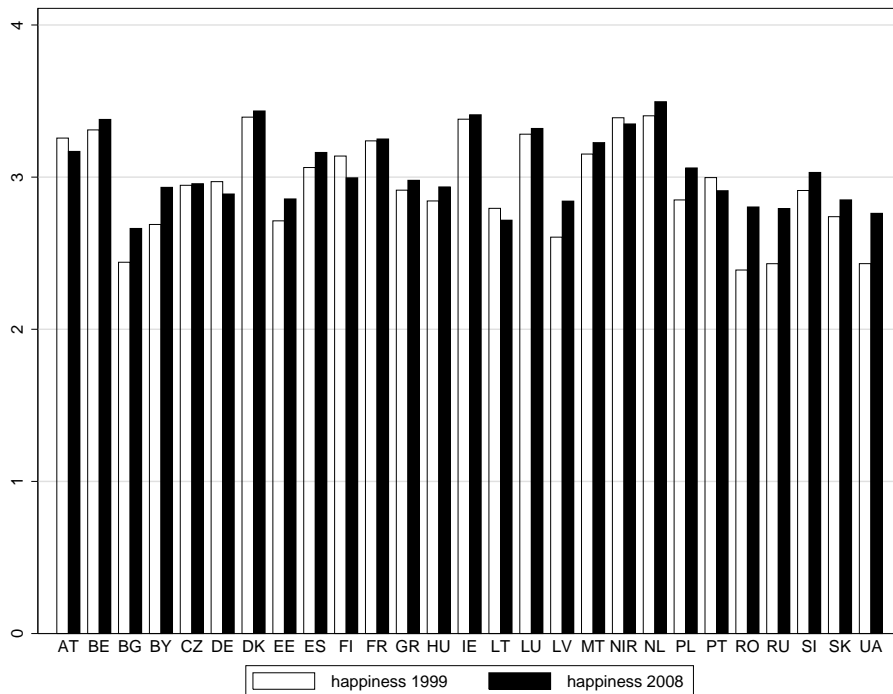
Lane (2002, :77) uses the term companionships to refer family and friendship. In the following, we use marriage or in union, stable relationship, family and friendship to measure this determinant. Binary answers were provided for the first two measures. Meanwhile, family and friendship are measured by ordinal answers. In the survey respondents were asked a question how important are friends and acquaintances in their life. Similar question was also asked to account for the importance of family in respondent's life. Respondents' answer range from "very important", "quite important", "not important", and "not at all important".

Social capital is measured by generalised trust and social networks (Putnam 1993, :63). Generalised trust was asked with a question: "Generally speaking, would you say that most people can be trusted or that you can not be too careful in dealing with people?" Social networks are measured by respondents membership in various voluntary organisations. The survey provides a list and asks whether respondents belong to various voluntary organisations ranging from social service for elderly, women's groups, peace movement, sports activities, education and culture groups. We now turn to the results beginning with overall descriptions of well-being in various countries in Europe during markedly different economic circumstances.

4 Well-being before and during the crisis in Europe

Figure 2 and 3 show the distribution of well-being across European countries before and during the crisis. We find a decline of happiness in Germany, Austria, Finland, Northern Ireland, and Portugal during the crisis. The crisis is less likely to affect happiness in most of Eastern European countries along with France, Netherlands, Spain, Belgium, Ireland, Luxemburg and Malta. We find instead an increase in happiness in those countries during the crisis.

Figure 2: Happiness before and during the crisis in Europe

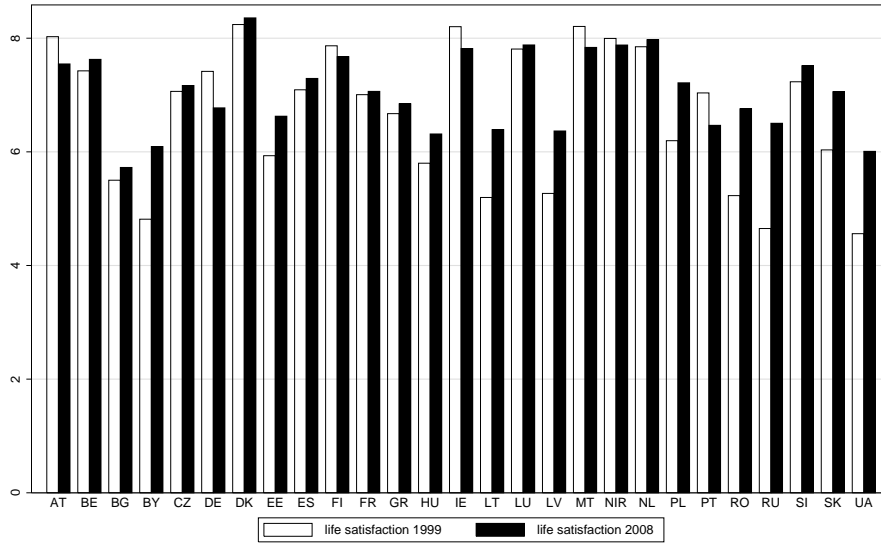


Source: European Value Study 1999 and 2008

The distribution of life satisfaction is almost similar with happiness. We find a decrease of life satisfaction in Germany, Austria, Finland, Northern Ireland, and Portugal during the crisis. There is also an increase in life satisfaction in most

of Eastern European countries along with France, Spain, Netherlands, Denmark, and Luxemburg. This somewhat unexpected results in Eastern Europe may have to do with their relatively recent transition from communism. The impacts of the crisis on happiness and life satisfaction are not uniform in Malta and Ireland. While happiness increases, life satisfaction declines slightly during the crisis in both countries.

Figure 3: Life satisfaction before and during the crisis in Europe



Source: European Value Study 1999 and 2008

Overall, the distribution of well-being in European countries is bimodal which are clustered on two groups: lower and higher well-being with cutoff around the mean of happiness and life satisfaction. The higher well-being cluster consists of most of Western Europe and Nordic countries, whereas most of Eastern Europe countries are clustered on the lower well-being clusters. Though the gaps between those areas are getting closer due to an increase in well-being in most of Eastern Europe, inequalities of well-being between those areas are evident. We next present the results of our multivariate multilevel analysis to get a deeper

understanding of the determinants of these inequalities.

5 Determinants of well-being in Europe before and during the crisis

The crisis affected the more vulnerable groups, including those with less income, unemployed, and older people severely. As presented in table 1 and 2, income is positively associated with well-being during the crisis; they who have higher income have better well-being compared with those with less income. The association between unemployment and well-being is quite strong compared with other factors. Europeans who are unemployed are likely to be less happy and less satisfied with their life compared with those who are employed. Likewise, older people have lower well-being. During the crisis, those who have more children are less satisfied with their life. Education is positively correlated with well-being in both periods; they who have higher education have better well-being. Students are happier but not more satisfied with their life compared to employed respondents.

Companionships and social capital are consistent predictors of well-being in Europe. Being married or in union, having family and friends, and stable relationship make Europeans happier and more satisfied both in times of plenty and crisis. Similarly, those who trust other people and have wider social networks or members of various voluntary organisations are happier and more satisfied.

Looking at determinants at the country level, respondents who live in more prosperous countries as indicated by higher GDP growth and per capita GDP are likely to have better well-being compared with those who live in less prosperous countries. But in Europe, this evidence is only shown during times of plenty. In

Table 1: Well-being and its determinants in Europe before and during crisis

	Happiness		satisfaction	
	Before crisis	during crisis	before crisis	during crisis
	Odd. ratio	odd. ratio	coef.	coef.
<i>Individual</i>				
Age	-0.081	-0.077	-0.079	-0.059
Female	0.055	0.018	0.001	-0.003
Education	0.033	0.072	0.056	0.068
Unemployment	-0.727	-0.307	-1.086	-0.492
Student	0.110	0.167	0.062	0.154
Income	0.006	0.313	0.017	0.415
Married/union	0.438	0.770	0.414	0.472
Family	0.395	0.358	0.339	0.351
Friendships	0.234	0.280	0.232	0.216
Stable relationship	0.483	0.200	0.262	0.126
Number of children	-0.001	-0.008	-0.001	-0.036
Trust	0.257	0.295	0.348	0.449
Social networks	0.047	0.029	0.059	0.027
<i>Country</i>				
Eastern Europe	-0.040	-0.084	-0.067	-0.145
Log GDP per capita	0.600	0.016	0.788	0.006
GDP growth	0.078	0.036	0.075	0.032
Corr. happy with satis	0.112	0.544	0.112	0.544
σ_u^2 happiness	0.102	0.244	0.102	0.244
σ_u^2 satisfaction	0.212	0.234	0.212	0.234
Intercept	-1.861	2.804	-1.861	2.804
R-squared	0.146	0.450	0.146	0.450

Bold =significance at 5%

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line with this finding, respondents who live in Eastern Europe are less happier compared with those in Western Europe.

Table 2 shows the same set of information but ordered differently to emphasize the comparison between the two measures of well-being rather than between the different economic circumstances. Happiness and life satisfaction are correlated with a magnitude of 11% before the crisis and 54% during the crisis. These results vindicate our decision to model them as multivariate response. Moreover, both variables are explained by different determinants. During the crisis, number of children, student, and living in Eastern Europe exhibit these differences, whereas before the crisis the difference between both measures is related to student status.

6 Discussion and conclusion

We aim to examine the effect of the current financial crisis on citizens' well-being in Europe. By comparing determinants of well-being before and during the crisis we have been able to show the effects of the crisis and also to highlight the difference between two common measures of well-being. We find that those who have less income, unemployed, and older people are likely to have lower well-being. The relation between income and well-being continue to confirm the income-well-being paradox in Europe (Eastearlin 1974; 1995). It shows that during the crisis income matters for well-being, whereas in times of plenty it does not.

Companionship and social capital are consistent predictors of well-being in Europe. The association between marriage or in union and well-being is stronger compared with other companionship measures. The reasons for the benefits of companionships and social capital are discussed widely in the literature. For instance, Lane (2002) concludes that the benefits of companionships are freedom

from loneliness and social support. The role of social support is also highlighted in social capital literature as a channel for enhancing well-being both at individual and community level. Kawachi et al (1998) for instance explain the function of trust and social networks for creating better functioning society which provide better social support for individual and community well-being.

Increasing well-being during the crisis in most of Eastern Europe along with some Western Europe and Nordic countries is a puzzle. One explanation may have to do with specific condition in each country, such as different social policies, which may lead to or protect its citizens' well-being. As yet, we can not include such determinants in the model since comparable information across all countries in the sample are not readily available. The evidence in Eastern Europe may also be related with increasing freedom in this area during this period. The evidence that freedom matters for well-being is supported by Helliwel (2008) who finds that citizens living in a context of freedom are significantly happier than those living in other contexts.

We also find that happiness and life satisfaction are correlated but are explained by different determinants. This finding is in contrast with previous research which pre-suppose that both are synonymous (Easterlin 1974, 1995, 2001; Mastekaasa and Moum 1984; Veenhoven 1991; Graham 2009). The methodological implication of these findings is that it is necessary for future research to treat happiness and life satisfaction as two different variables rather than use them interchangeably.

There are a number of limitations of this study which are left for further research. First, we cannot establish a direction of causality with these findings. It could be, for example, that higher well-being make respondent have higher social capital. Or, marriage may make couple happier. In contrast, happier people may find it easier to find partners. In this study, we do not solve the reverse

causality problem. Second, recent studies suggest the importance of process of adaptation and changing aspiration to understand economic behaviour (Easterlin 2005; Kahneman and Krueger 2006). Easterlin (2005) for example suggests that aspirations about economic wealth and other pecuniary aspects of well-being tend to change with the level of actual circumstances, suggesting almost complete adaptation. To examine this process, panel data with well-being measures and rich information on pecuniary and non-pecuniary measures are needed. Third, missing data are common problem in cross-countries survey like the EVS. Missing data occur not only at the individual level but also at the country level. Multiple imputation multilevel model should be used to deal with this problem in future works.

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Table 3: Descriptive statistics (**Appendix 1**)

	1999	2008
	mean or %	mean or %
<i>Individual</i>		
Happiness	3.0	3.0
Life satisfaction	6.7	7.0
Age	42	43
Female	54%	56 %
Education	4.6	3.2
Unemployment	8%	11%
Student	7%	7%
Income	9.3	7.7
Married/union	59%	57%
Family	41%	42%
Friendships	85%	84%
Stable relationships	67%	63%
Trust	30%	30%
Social networks	1.40	1.10
<i>Country</i>		
Eastern Europe	41%	62%
Log GDP per capita	25.9	23.6
GDP growth	3.0	2.8

Table 4: Well-being and its determinants in Europe before and during crisis (happiness is treated as ordinal-scaled, life satisfaction is treated as continuous-scaled) (**Appendix 2**)

	Before crisis		during crisis	
	Happiness	satisfaction	happiness	satisfaction
	Odd. ratio	coef.	odd. ratio	coef.
<i>Individual</i>				
Age	-0.083	-0.069	-0.077	-0.069
Female	0.054	0.001	0.016	-0.004
Education	0.034	0.055	0.052	0.068
Unemployment	-0.737	-1.076	-0.317	-0.452
Student	0.120	0.062	0.157	0.154
Income	0.006	0.016	0.313	0.415
Married/union	0.428	0.424	0.770	0.472
Family	0.375	0.349	0.358	0.351
Friendships	0.214	0.242	0.280	0.216
Stable relationship	0.473	0.252	0.200	0.125
Number of children	-0.001	-0.001	-0.008	-0.036
Trust	0.247	0.358	0.295	0.459
Social networks	0.047	0.057	0.025	0.025
<i>Country</i>				
Eastern Europe	-0.030	-0.145	-0.084	-0.067
Log GDP per capita	0.600	0.778	0.016	0.006
GDP growth	0.068	0.065	0.036	0.032
Corr. happy with satis	0.152	0.152	0.544	0.544
Intercept	-1.861	-1.861	2.804	2.804
Residual variance satis	4.337	4.337	4.415	4.415
R-squared	0.146	0.146	0.450	0.450

Bold =significance at 5%