Subjective Economic Well-being in Eastern Europe

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Abstract

This paper analyses subjective economic well-being in several Eastern European countries from 1991 to 1995. Economic well-being explains a significant part of the variation in overall life satisfaction of Eastern Europeans. In an ordered logit model, the determinants of subjective economic well-being are analysed. Some results are very similar to typical findings in happiness regressions, such as a negative but u-shaped age effect, positive influences of education and relative income position, as well as a negative effect of unemployment. Differing results were found with regard to gender and marital status. Finally, comparing indicators of objective and subjective well-being on a macro level indicates that using a standard macro variable for cross-country comparisons in well-being, such as real GDP per capita, may provide misleading results during the early stages of transformation.

Keywords: Eastern Europe, Economic Well-being, Happiness, Economic Transformation

JEL: D31, D60, I31, O52, P2

1. Introduction

After the fall of the Iron Curtain, a majority of citizens of Eastern and Central European countries were looking forward to economic and political reforms. It was expected the transformation process would lead from the socialist system to a new system reflecting the Western Model consisting of a democratic political system and a market economy. These two ingredients were seen as a direct way to material prosperity (Zuzowski 1998). Instead of a quick economic recovery, however, the transition process brought considerable economic hardship. Declining industrial production, increasing unemployment, high inflation, and decreasing real wages and salaries, led to a deterioration of living conditions for many Eastern Europeans (for details: EBRD 1998). These shifts in general economic conditions can be expected to influence the reported or *subjective* well-being of people in the countries of transition. There are at least three reasons why it is important to study subjective economic well-being.

The first motivation for analysing subjective economic well-being is, at least in principle, a key target variable of economic policy. Whether this implies maximising a welfare function directly, as argued in Di Tella et al. (2001), or raising welfare indirectly by creating appropriate institutions, as suggested by Frey and Stutzer (2000), is a different matter and need not concern us here. Traditional economic approaches to measuring welfare have encountered numerous difficulties in practice (see Slesnick 1998). A different route is taken by studies focussing on reported well-being, often called happiness (see Easterlin 1974, Strumpel 1974). Recently, the Economic Journal has devoted a Symposium to Economics and Happiness (Oswald 1997, Frank 1997, Ng 1997). Fostered by the availability of good survey data, in the last few years empirical research in this area has become quite active. For instance, Clark and Oswald (1994) look at how unemployment affects subjective well-being, Frey and Stutzer (2000a) analyse the effect of political institutions on happiness, and Di Tella et al. (2001) focus on macroeconomic issues of recorded well-being.

A disadvantage of looking at happiness in general, when specifically interested in the effect of economic variables, is economic effects may be overshadowed by non-economic effects which are difficult to control. Take the following example: Happiness studies typically find married respondents are happier than singles. Is this result due to economic or personal reasons? The dependent variable, happiness, is very broadly defined so the cause is unknown. Using our data set on Eastern Europe, which uses *economic* well-being as the dependent variable, we obtain the

result that subjective economic well-being is not statistically different between those who are single and those who are married. Assuming this outcome is not due to employing a different data set, the implication would be that although general well-being is raised by marriage, its effects on economic well-being are negligible after controlling for other effects.

In other words, we are interested in the specific effect of variables on *economic* well-being, which can be interpreted as a subcategory of overall well-being. A crucial theoretical assumption for being able to proceed is that the general utility function is separable with respect to different dimensions of well-being, e.g. economic well-being, political well-being, etc. It is then possible to concentrate on the determinants of economic well-being while ignoring all other influences on general well-being as defined by happiness. In the empirical implementation, this leads to an advantage because the omitted variable bias will be much less of a problem than in the case of analysing the effect of economic variables on happiness.

The second motivation for studying subjective economic happiness in Eastern Europe is based on political economy considerations. Whether people are economically satisfied or not economically satisfied will influence their support for a market economy and democracy (see Fidrmuc 2000, Hayo 1999). Public support can be seen as an important precondition of a successful transformation process; therefore it is worthwhile to study factors that may have an influence on its success.

The third motivation is based on whether one should look at *objective* or *subjective* economic conditions when making welfare comparisons. The approaches focussing on happiness emphasise subjective well-being but other researchers argue that one should use some form of objective well-being (see, for instance, Broome 1991). In practice, economists often use objective economic data to describe well-being, for example, real GDP per capita. It is therefore important to understand the relationship between objective and subjective indicators of well-being.

The literature provides ample empirical evidence that subjective economic well-being is not just a reflection of material or objective living conditions. For instance, studies show in western societies people with objectively good living conditions can be subjectively dissatisfied (dissonance), and people with bad living conditions can be subjectively satisfied (Allardt 1973, Easterlin 1974, Glatzer 1984). One explanation for this finding is that people do not only look at their living conditions in isolation, but that they compare their situation with that of others (Campbell et al. 1976, Mau 1996). This comparison not only takes place with respect to immediate neighbours, but also by taking other regions and countries into account.

This comparison is not a static one (see Easterlin 1974, 2000). People compare how fast or slow living conditions are changing relative to others, and they create expectations about future economic well-being (cf. Hirschman and Rothschild 1973). Even when objective living conditions are deteriorating in the economy, the decline may be smaller for some households, making those people feel relatively better off. On the other hand, stable living conditions can be seen as a reason for dissatisfaction if general living conditions are improving. For the population in transition countries, comparing current conditions with the former socialist system is especially important (Rose and Mishler 1994). Comparing their subjective situation over time, people will classify themselves as winners or losers of the transformation process (Habich and Spéder 1998), which then may affect their incentive for political action.

The rest of the paper is organised as follows: We describe the database briefly in Section 2. In Section 3, we compare subjective economic well-being and life satisfaction, and provide a description of the average development of subjective economic well-being over time and countries. Section 4 presents an attempt to explain subjective economic well-being using an ordered logit model. The relationship between subjective and objective well-being on a macroeconomic level is analysed in Section 4. Finally, a conclusion and summary is put forward.

2. Description of database

Between 1991 and 1995 the Paul-Lazarsfeld-Society in Vienna has carried out four representative and comparable surveys in Bulgaria, the Czech and Slovak Republics, Hungary, Poland, Romania, Slovenia, Croatia, Belarus and the Ukraine (see Rose et al. 1998). Approximately 1000 interviews were conducted in every country. Access to the raw data is restricted to primary and secondary researchers organised in the "Citizens in Transition Network".[1]

All interviews were face-to-face, since limited telephone ownership means phone interviews would not generate a representative sample. The basic sampling procedure in each country followed ESOMAR principles of a multi-stage, random probability sample, in which the population is stratified regionally, and within regions according to urban/rural divisions and town size. One hundred or more primary sampling units were drawn and within each of those,

[1] Detailed information on the survey project, including questionnaires, is available at the Centre for the Study of Public Policy (CSPP) homepage: www.cspp.strath.ac.uk.

individual respondents were chosen on the basis of standard random procedures, such as the Kish matrix or selecting the household member next having a birthday. A proportion of interviews is subsequently verified by the survey institute.

Table 1 presents the time periods and countries covered by the data set employed in this analysis.

Tab. 1: NDB Surveys across time and countries

Year	1991	1992	1993/94	1995
Austria	X			
Belarus		X	X	X
Bulgaria	X	X	X	X
Croatia		X	X	X
Czech	X	X	X	X
Hungary	X	X	X	X
Poland	X	X	X	X
Romania	X	X	X	X
Slovakia	X	X	X	X
Slovenia	X	X	X	X
Ukraine		X	X	X

Austria, as a western country, can serve as a reference category to put the findings into a better comparative perspective. Unfortunately, Austria has only been included in the first wave of surveys. The sample size of the combined survey is 37822 observations. However, most of the analyses presented below have to use a much lower number of cases due to missing values for at least one of the variables of interest.

3. Comparing subjective well-being over time and countries

As outlined in the introduction, we are concerned with studying subjective economic well-being. The dependent variable in our study is the evaluation of the current economic situation of the family of the respondent, which we interpret as subjective economic well-being. The original question and the coding of answers are given in Table 2:

Tab: 2: Dependent variable defined as subjective economic well-being

All in all, how do you rate the economic situation of your family today?	Very unsatisfactory:	1
	Unsatisfactory:	2
	Satisfactory:	3
	Very satisfactory:	4

In the first step, we measure how strongly happiness, which is the typical variable of interest in the literature, is associated with subjective economic well-being. The first wave of surveys contains a question directed at life satisfaction (On the whole, are you very satisfied, not very satisfied, or not at all satisfied with the life you lead?; coded in three categories), which appears to be capturing similar responses than a question asking about happiness (see Blanchflower and Oswald 2000).

Table 3 shows correlation coefficients for the association between life satisfaction and subjective economic well-being.[2]

Tab. 3: Correlation coefficients of subjective economic well-being and life satisfaction in 1991

All cases	Austria	Bulgaria	Czech Republic	Slovak Republic	Hungary	Poland	Romania	Slovenia
0.50**	0.27**	0.39**	0.26**	0.20**	0.35**	0.41**	0.57**	0.39**

Notes: Spearman rank correlation coefficients. **(*) indicates significance at a 1 (5) percent level.

We find that the correlation coefficient for all cases is quite high. Approximately 50% of the variation in overall well-being is shared with the variation in economic well-being. Looking at the individual country results we see differences and generally lower values, with the only exception being Romania. Thus, the general conclusion emerging from Table 3 is that economic well-being clearly matters for overall well-being. At the same time, the relationship is not perfect and a number of non-economic influences will also have an effect on happiness. This result is not surprising given other studies in the literature (see Cantril 1965, Campbell et al. 1976), but it is re-assuring to find such a relationship in the present data.

[2] Note that the question on life satisfaction is directed towards the interviewee, while the one on subjective economic well-being mentions the family of respondent as the reference group.

We continue the analysis by comparing the economic situation of respondents across countries and time (see Table 4).

Table 4: Subjective economic well-being across time and countries (in %)

	1991	Expect improvement	1992	1993/94	1995	Expect improvement
Austria	86	n.a.	n.a.	n.a.	n.a.	n.a.
Bulgaria	37	54	39	34	30	47
Czech Republic	58	58	60	53	56	47
Hungary	23	47	20	19	20	36
Poland	17	41	23	24	37	50
Romania	37	63	33	32	47	53
Slovak Republic	46	47	48	39	36	41
Slovenia	28	66	45	50	42	48
Belarus	n.a.	37	36	40	24	35
Croatia	n.a.	75	66	29	34	70
Ukraine	n.a.	50	31	25	9	30

In 1991, most people in the transformation countries did not regard the economic situation of their household as satisfactory. Only in the Czech Republic were more than half of the population satisfied. This is a low value in absolute terms and this can be shown by comparing it with Austria, where 86% of respondents were satisfied with the economic situation of their household. As 1991 was a period of dramatic economic and political changes, this result may not be particularly surprising. Moreover, in all of the countries, the population was quite optimistic the economic situation would improve, or at least not deteriorate, during the next five years (column 3 gives the percentage of those who expect an improvement in 1991 or 1992).

In most countries the market economies, at least partially established, were not able to generate satisfactory economic well-being even at the end of our sample period in 1995. With the exception of Hungary and Romania, the share of people satisfied with the economic situation of

their household increased in 1992. However, in most countries the share of those satisfied with their economic situation declined again in 1993/94. A different trend can only be observed for Slovenia, Belarus, and Poland. In 1995, the Czech Republic remains the only country where more than 50 percent of the population are satisfied with the economic situation of their household.

The last column displays the share of people who expect an improvement in five years time in 1995. Respondents were less optimistic in 1995 than they were in 1991 (except for Poland), and the most positive expectations prevailed in Croatia. This may be explainable by the fact that this country was severely hit by civil war, and hopes were high that with the establishment of peace, prosperity would follow. Very pessimistic attitudes can be found in the successor states of the former Soviet Union, Belarus and Ukraine. Thus, subjective economic well-being in Eastern Europe is still much below values prevalent in Western countries, it has not really risen over the sample period, and people do not expect a quick change of that situation.[3]

4. Explaining economic well-being

To assess the determinants of subjective economic well-being in a multivariate setting, we run an ordered logit model using observations across time and countries. We account for country and time fixed effects using dummy variables. Table 5 summarises the findings.

Tab. 5: Explaining subjective economic well-being (ordered logit model)

	Coeff.	Std. Err.	Coeff.	Std. Err.
Year dummies:				
Year 1991	Reference group			
Year 1992	0.033	0.068		
Year 1993/94	-0.141 *	0.071	-0.171 **	0.040
Year 1995	-0.535 **	0.073	-0.560 **	0.046

[3] There is an issue related to the question of whether we should expect any long-term increase in subjective economic well-being. There are a number of studies related to happiness, which suggest that although per capita income is rising average happiness basically stays constant (see Easterlin 1995, Argyle 1999, Kenny 1999). To our knowledge, there are no studies looking at subjective economic well-being over long time periods. We believe that in early stages of transformation the catch-up of subjective well-being to the level of industrial countries would dominate any major effects due to relative income considerations.

Tab. 5 continued

Country dummies:						
Czech Republic	Reference group					
Bulgaria	-0.350	**	0.067	-0.368	**	0.057
Slovak Republic	-0.107		0.059			
Hungary	-1.215	**	0.071	-1.150	**	0.065
Poland	-0.879	**	0.072	-0.802	**	0.059
Romania	-0.364	**	0.084	-0.361	**	0.076
Croatia	-1.145	**	0.066	-1.101	**	0.060
Ukraine	-0.403	**	0.078	-0.387	**	0.074
Econ. situation compared to 5 years ago						
Past much worse	Reference group					
Past worse	0.678	**	0.091	0.557	**	0.052
Past similar	0.745	**	0.086	0.626	**	0.042
Past better	0.135		0.083			
Past much better	-0.473	*	0.084	-0.591	**	0.039
Econ. situation in 5 years compared to now						
Future much worse	Reference group					
Future worse	0.887	**	0.084	0.896	**	0.083
Future similar	1.185	**	0.078	1.194	**	0.078
Future better	1.387	**	0.080	1.396	**	0.079
Future much better	2.210	**	0.097	2.215	**	0.097
Evaluation of Socialist economic system						
Negative	Reference group					
Neutral	0.043		0.059			
Positive	0.049		0.037			
Evaluation of current economic system						
Negative	Reference group					
Neutral	0.141	**	0.051	0.136	**	0.050
Positive	0.548	**	0.039	0.549	**	0.040

Tab. 5 continued

Evaluation of economic system in 5 years						
Negative	Reference group					
Neutral	0.277	**	0.060	0.280	**	0.060
Positive	0.400	**	0.047	0.405	**	0.047
Age effect:						
Age	-0.028	**	0.007	-0.027	**	0.006
Age squared	0.0004	**	0.0001	0.0004	**	0.0001
Gender effect:						
Female	-0.072	*	0.032			
Income quartiles						
Lowest income quartile	Reference group					
Lower-middle income quartile	0.058		0.045			
Upper-middle income quartile	0.288	**	0.047	0.260	**	0.039
Highest income quartile	0.679	**	0.050	0.653	**	0.042
Material goods index	0.314	**	0.018	0.317	**	0.018
Education:						
Primary school	Reference group					
Vocational training	0.176	**	0.046	0.197	**	0.045
Secondary school	0.247	**	0.045	0.256	**	0.045
University	0.377	**	0.058	0.391	**	0.058
Type of employment:						
Household, student	Reference group					
Full-time employee	0.078		0.077			
Part-time employee	-0.275	*	0.111	-0.331	**	0.086
Family helper	0.664	**	0.204	0.639	**	0.187
Apprentice	-0.138		0.266			
Unemployed	-0.686	**	0.094	-0.754	**	0.065
Pensioner	-0.026		0.090			
Allowance	-0.329	**	0.107	-0.404	**	0.081
Widow pension	-0.543		0.282			

Tab. 5 continued

Community size:						
< 5000 inhabitants	Reference group					
5001-20000 inhabitants	-0.175	**	0.047	-0.180	**	0.047
20001-100000 inhabitants	-0.293	**	0.043	-0.300	**	0.043
> 100000 inhabitants	-0.374	**	0.043	-0.382	**	0.042
Marital status:						
Single	Reference group					
Married	-0.053		0.050			
Divorced	-0.240	**	0.077	-0.206	**	0.063
Widowed	-0.226	**	0.073	-0.224	**	0.057
Church attendance:						
Never	Reference group					
Seldom	-0.016		0.052			
Several times a year	0.005		0.058			
Once a month	-0.038		0.068			
Every week	0.067		0.063			
Religion:						
Catholic	Reference group					
Protestant	0.040		0.086			
Orthodox	-0.366	**	0.064	-0.323	**	0.051
Muslim	-0.258		0.150			
Other	-0.002		0.089			
Non believer	-0.041		0.062			
No answer	-0.276	**	0.102	-0.257	**	0.092
Cases	16511			16511		
Log likelihood	-15909.7			-15924.4		
Chi^2-test	$Chi^2(58) = 5662$**			$Chi^2(38) = 5632$**		
Pseudo R^2	0.15			0.15		
Test for excluding variables	$Chi^2(20) = 29.4$					

Notes: **(*) indicates statistical significance at a 1 (5) percent level. Cut values have been omitted.

Column two lists estimated logit coefficients and column three the corresponding standard errors, and columns four and five contain the remaining significant variables after a consistent testing-down process. In view of the large sample size, we only consider variable estimates, which are significantly different from zero at a 1% level in the interpretation of the outcome of the regression analysis (see Leamer 1978).

There are two significant year dummies, 1993 and 1995, with the latter displaying the absolutely larger value. This result signals the economic situation has worsened even after accounting for other variables. All of the significant country dummies show negative signs. Thus, the situation in the Czech Republic is better than in any of the other countries except for Slovakia. Here, as well as in other studies (see Hayo 1997), Hungarians are relatively more negative about their economic situation when giving a subjective assessment than an analysis using objective indicators would conclude (see Section 5).

How do past experiences affect the judgment about the current economic situation? Comparing the change in the economic situation to five years ago we see no straightforward results except for those households that felt much better in the past. These households declare themselves to be worse off. However, we find that the most positive group consists of those who mention no subjective improvement in the economic situation compared to five years ago.

Arguably, people take future expectations into account when forming an assessment about their economic situation. This result naturally arises if well-being at every moment of time is a discounted sum of contemporaneous and future well-being. In behavioural terms, this means that an a priori unsatisfactory economic situation may become more bearable if the respondent believes the situation will improve in the future and vice versa. When looking at the variable capturing people's expectations regarding their economic situation we find a clear effect on subjective economic well-being. The more positive respondents are with respect to the future, the higher they report their economic well-being.

The economic system evaluations contain comparisons of the socialist economic system, the current economic system, and the economic system people expect to exist in five years time. While we find in a simple bivariate context that the well-being of those respondents who think positively of the socialist system is relatively smaller, this is not the case in a multivariate framework.

The more positive the current economic regime is evaluated, the higher reported well-being. This is true for the expectation of the future economic system as well. People are more likely to report

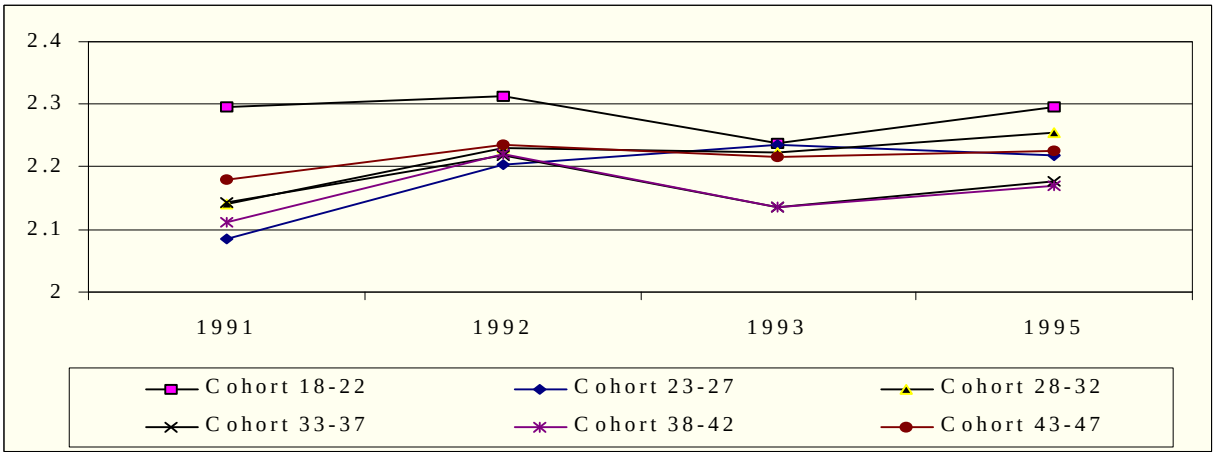
a high subjective economic well-being if they have a positive expectation about the economic system in five years time. The relationship between personal economic well-being and the general economic system can be interpreted as part of the effort of the respondent to construct a coherent belief system (see Strube 1987).

Age has a negative effect on economic well-being but enters non-linearly. The effect is u-shaped with a minimum at an age of 37. The influence of age turns positive at an age of 75 years. Remarkably, similar results can be found in some studies on happiness. For instance, Blanchflower and Oswald (2000) obtain for US data that the minimum happiness occurs at an age of 37 years, and it becomes positive after 74 years. This indicates that old people do not view their situation as particularly bad after accounting for other effects.

However, when interpreting age effects, one has to distinguish between true age effects and cohort effects. Since we do not have a true panel data set, where one can follow the life cycle of specific individuals, we make use of a method called 'synthetic' cohort technique, which has been employed very recently by Easterlin (2000, 2000a) in the context of studying happiness. The idea is to compute age groups (we use 5 year intervals) for the first available survey date and then to compare the variable of interest, here subjective economic well-being, by moving the age cohort across time along with the available surveys. This gives an impression of how the well-being of a specific age group, for example those 18-22 in 1991, moves over time.[4]

Figure 1 displays the change of average well-being across time for the six youngest age cohorts.

Fig. 1: Following age cohorts over five years of survey time

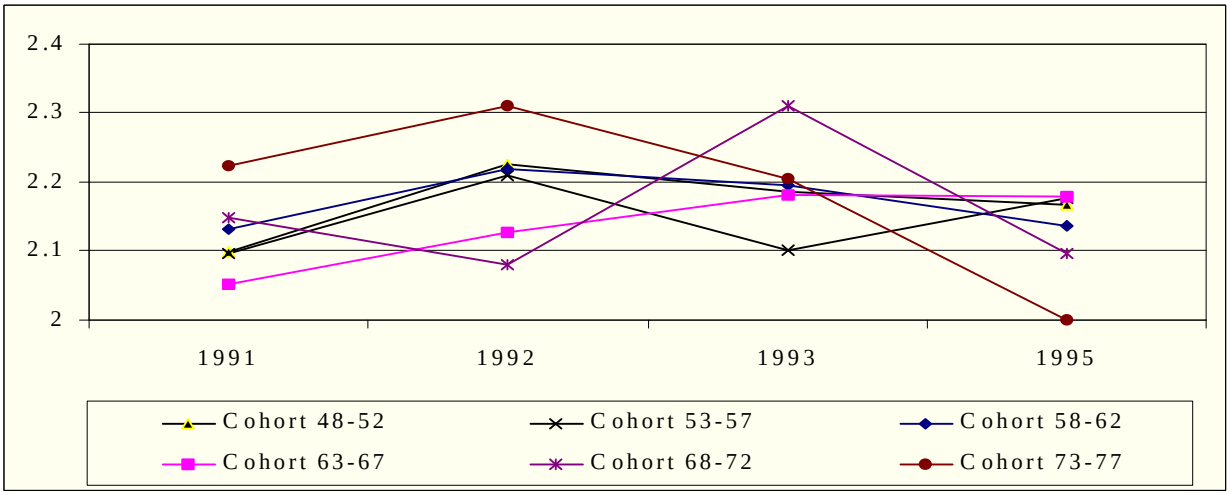


[4] To avoid fluctuations of cohort averages due to changes in included countries, we exclude Austria, Belarus, Croatia, and Ukraine from the sample. The size of age cohorts is always above 420 cases, except for the two oldest age cohorts. This should be sufficient to preserve representativity of the respective samples.

Although we find some variation and a slight improvement for most cohorts, there is no obvious time trend. The most noteworthy observation is the youngest age cohort is much more positive in its assessment than the other age cohorts, but over time this difference almost disappears.

The six oldest age cohorts are shown in Figure 2, and it is apparent that the four relatively younger cohorts move similarly to the ones we have seen in the preceding picture.

Fig. 2: Following age cohorts over five years of survey time



But the two older cohorts show greater variation, and the oldest cohort displays a clear downward trend. We do not want to put too much emphasis on these results, as the sample size of the groups at the end of the spectrum is less than half of what is available before and the variance is much higher. Because of this we might be experiencing a sampling problem. To summarise, even after controlling for cohort effects, we do not find obvious time trends in our data that indicate a strong improvement in economic well-being over the sample period.

Many studies on happiness report females are happier than males (cf., for instance, Di Tella et al. 2001 for European Community countries, Frey and Stutzer 2000, 2000a for Switzerland, Blanchflower and Oswald 2000 for Great Britain and the USA).[5] In our data there is no particular gender effect. Assuming gender differences also exist in Eastern Europe leads to the conclusion that these differences in happiness do not relate to economic well-being. Blanchflower and Oswald (1998) provide some evidence that the effects of unemployment on happiness are quite

[5] However, Easterlin (2000) shows that this pattern is not necessarily true for all birth cohorts in the US.

similar in Eastern Europe compared to Western countries. Rather, this may indicate that differences are due to the nature of the dependent variable and not the specific regional sample. However, a generalisation of this particular result to all explanatory variables is not warranted.

The relationship between objective and subjective indicators of well-being is empirically less obvious than one would think (see Campbell et al. 1976, Knox and MacLaran 1977, Kuz 1978, Dale 1980, Diener et al. 1993). An important reason that the correlation between these two dimensions of well-being is less than perfect relates to the problem of measuring similar life domains. Our focus on economic well-being, and the use of a broad range of indicators, should help to alleviate this problem.

Our first indicators for measuring the objective economic situation of the respondents are income quartiles. Except for the lower-middle income quartile, we find a positive effect. The difference between the upper-middle and high-income quartiles is statistically significant, so persons with a relatively higher income report greater economic well-being. This is also a recurring finding in the literature on happiness, where people with a relatively higher income say that they are happier (cf. Di Tella et al. (2001), Frey and Stutzer (2000, 2000a), Blanchflower and Oswald (2000)).[6]

The second indicator of the objective economic situation is the material goods index, which can be interpreted as a crude measure of material wealth of households. This index is based on answers to the questions of whether the household has a telephone, colour TV and/or a car and ranges from 0 to 3.[7] Individual values are almost uniformly distributed over the four categories of the index, which allows for an interpretation as wealth quartiles. So far, wealth effects have not been studied very much in the comparative happiness literature due to difficulties in deriving useful proxy variables across countries. In the logit model in Table 5, the material goods index shows a positive sign, which is in accordance with our expectations. In other words, the greater people's wealth, the higher reported well-being.

Education is sometimes seen as a broad indicator for living conditions (see Dale 1980), and here it displays a highly significant and positive influence on subjective economic well-being. This is an effect in addition to the objective economic situation, as captured by wealth and income indicators. The Spearman correlation coefficients for education versus income quartiles and material goods index are both 0.31. Running the regression without these control variables would

[6] It is noteworthy that Frey and Stutzer (2000) also report a marginal statistical significance for the lower-middle income quartile (10% significance level).

[7] The index is based on the assumption that people always choose to purchase these goods as long as they are not facing any binding financially constraints.

increase size and significance of the education variables, which indicates that the education dummies are partially picking up wealth and income effects. The remaining explanatory power of education seems to be either related to other psychological factors, or is due to problems resulting from omitting objective income or wealth variables.

Regarding type of employment, we find that the unemployed consider the economic situation of their household as relatively bad. This is the strongest negative effect among the type of employment dummies and also correlates to the happiness studies on western countries (see Clark and Oswald 1994, Winkelmann and Winkelmann 1998). Part-time employees and those receiving an allowance also feel less well off. The reported economic well-being of family helpers is significantly higher. This may underline the importance of non-market economic relations, as argued by Rose and McAllister (1996) in the case of Russia.

The size of the community where people live has an influence on economic well-being. The larger the settlement, the lower the economic satisfaction, in spite of the better economic opportunities provided by cities. However, these opportunities typically require adequate education, which is already controlled for. The Spearman correlation coefficient between education and size of community is 0.28. We believe the impact of settlement size is due to the existence of greater income inequality within cities. Dale (1980) finds indicators of objective well-being are especially high in urban areas, whereas subjective well-being appears to be larger in less populated areas. People see others who are much richer and, therefore, feel much poorer compared to those living in less urban areas. This could also be linked to the framework developed by Easterlin (2000a), who argues that aspirations are non-constant. While his argument is based on the life cycle, we employ it in the context of a regional comparison of one's economic situation. Another influence may be in smaller settlements, home production – especially growing food – is much easier to realise (cf. Rose et al. 1998), and lack of food has a negative effect on economic well-being. Additionally, prices for necessary consumption goods tend to be lower in rural areas compared to cities. Thus, price effects may lead to a relatively higher purchasing power of income in rural areas.

Being divorced or widowed indicates worse economic well-being after accounting for other influences. Almost all happiness studies report being married raises happiness relative to being single. Since we do not find a significant effect on economic well-being, the positive influence of marriage on overall subjective well-being does not result from any economic consequences other

than those already being controlled. This conclusion is conditional on these differences not being due to comparing different groups of countries.

Church attendance does not matter at all, while with respect to the variables reflecting different religions, which can also be interpreted as cultural differences (cf. Huntington 1996), being Orthodox and giving no answer has a significantly negative effect. The Orthodox-effect is mainly due to respondents from Bulgaria.

5. Subjective versus objective well-being

We now turn towards the usefulness of subjective economic well-being in cross-country comparisons. In particular, we study the relationship between subjective economic well-being, objective economic well-being, and a widely used macroeconomic indicator, real GDP per capita.

Our proxy for objective well-being is the material goods index, as most of the other variables cannot be easily employed for this purpose. To get an idea of the usefulness of the material goods index, we ask the question of whether there is an association, at the individual level, between the stock variable wealth and the flow variable income. Income quartiles are a widely used indicator based on flows for measuring the relative economic position of individuals in society. Since both variables are of at least an ordinal scale, we can compute a Spearman correlation coefficient, which takes on a value of 0.32 (significant at a 1% level, 19962 cases). This result shows both variables are positively correlated, and a coefficient of this size can be considered to be relatively high in a sample such as the one at hand.

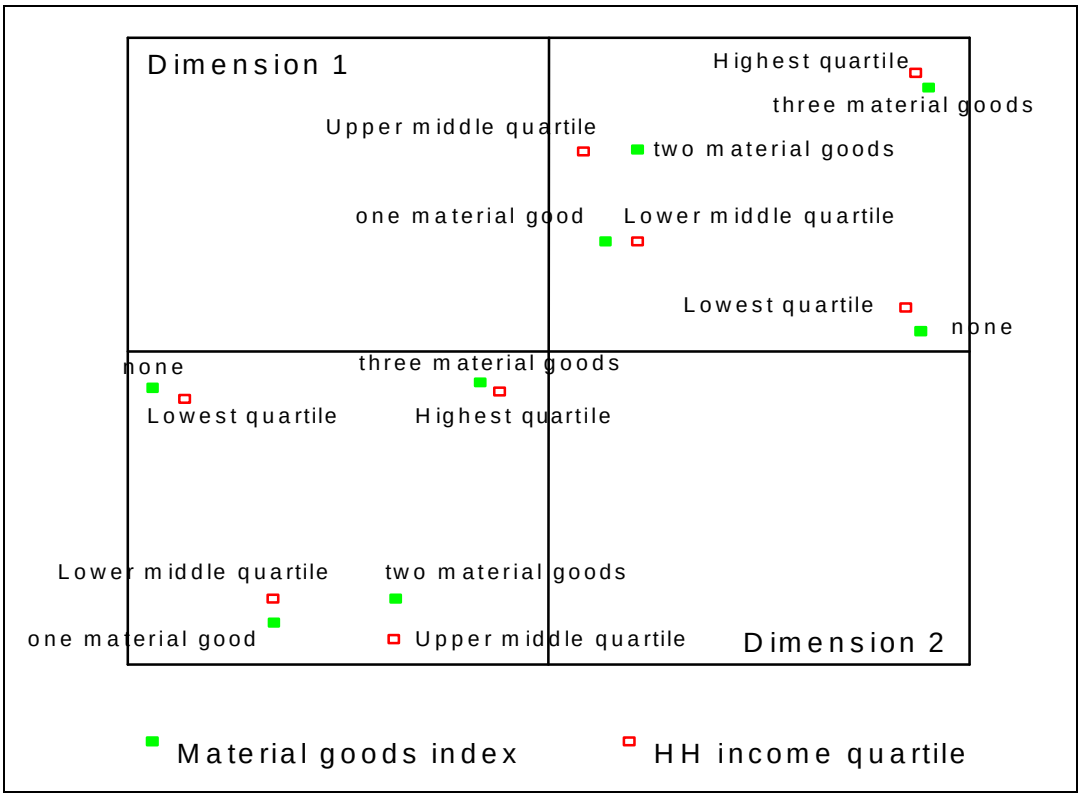
However, another statistical technique may be more helpful when it comes to comparing the four categories of the respective variables, namely correspondence analysis. This is a very robust statistical method, which does not require many assumptions (Greenacre 1984). The closeness of the respective categories can be represented conveniently by their graphical distance. Figure 3 plots the relationship between the categories of the two variables based on a symmetrical normalisation.

Dimension one explains most of the variance, about 94%, meaning that we have to compare the vertical distance between the points representing the categories shown in the upper right hand area of the diagram. The correspondence between the categories is quite striking because people who report to have none of these material goods are associated clearly with those that are in the

lowest income quartile, and so forth. To conclude, the material goods index appears to capture a very similar microstructure as the income quartiles, and thus income and wealth are closely related at the individual level.

However, the material goods index has an advantage over income quartiles: it can be used for cross-country comparisons. Consequently, we proceed from the micro to the macro level. We treat the average material goods index as an indicator of general objective living conditions in a country and compare it with average subjective economic-well being in Eastern European countries. In addition, we compare these indicators, derived from survey data, with a proxy for living conditions based on macroeconomic data, namely real GDP per capita.

Fig. 3: Correspondence analysis between income quartiles and material goods index

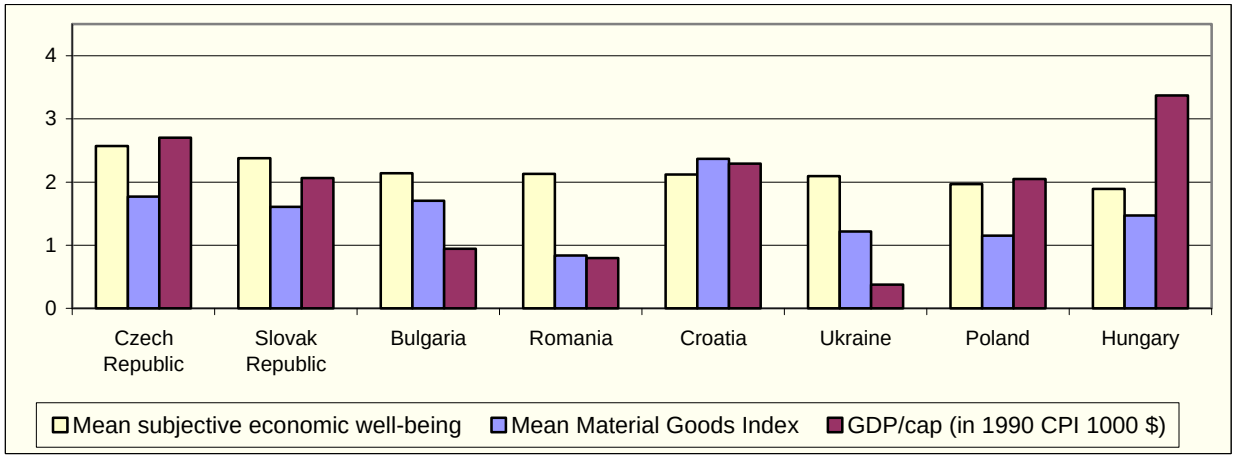


The following graphs show average values of subjective economic well-being, material goods indices and GDP per capita in real 1990 US Dollar terms. In Figure 4, values for 1992 are shown.[8] The countries are ordered according to their mean values on subjective well-being. The Czech Republic shows the highest subjective economic well-being, while Hungary displays the

[8] In 1991, relevant data is only available for Bulgaria and Romania.

lowest. According to the material goods index, Croatia has the highest average living standard, followed by the Czech Republic, and Romania at the end of the spectrum. Using GDP values, we conclude Hungary is the richest and Ukraine is the poorest country. Hence the correspondence between these three indicators of economic well-being is less than perfect.

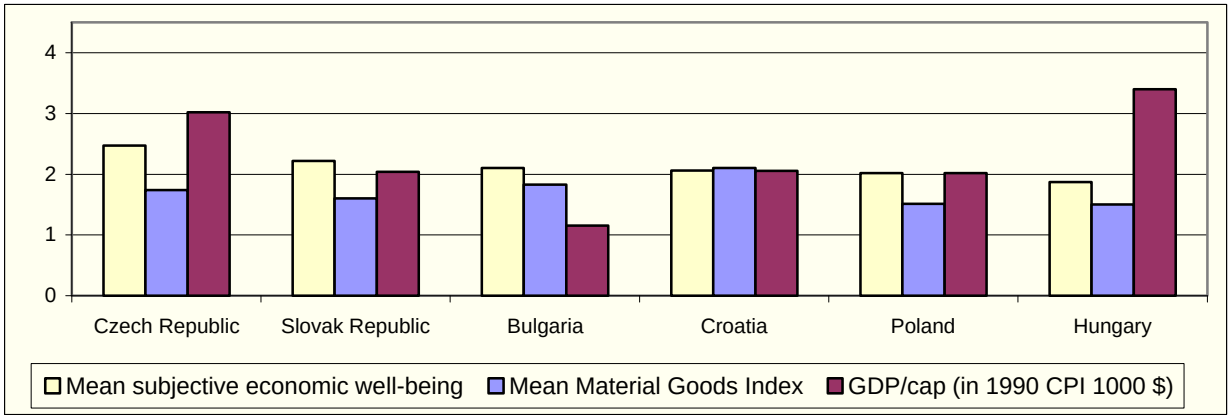
Fig. 4: Subjective economic well-being, material goods index and GDP/cap in 1992



Source: New Democracies Barometer 1992, EBRD Transition Report 1998, own calculations.

For the 1993/94 surveys and 1993 GDP values we find a very similar ranking for those countries that were covered in both waves of surveys (see Figure 5).

Fig. 5: Subjective economic well-being, material goods index and GDP/cap in 1993/94

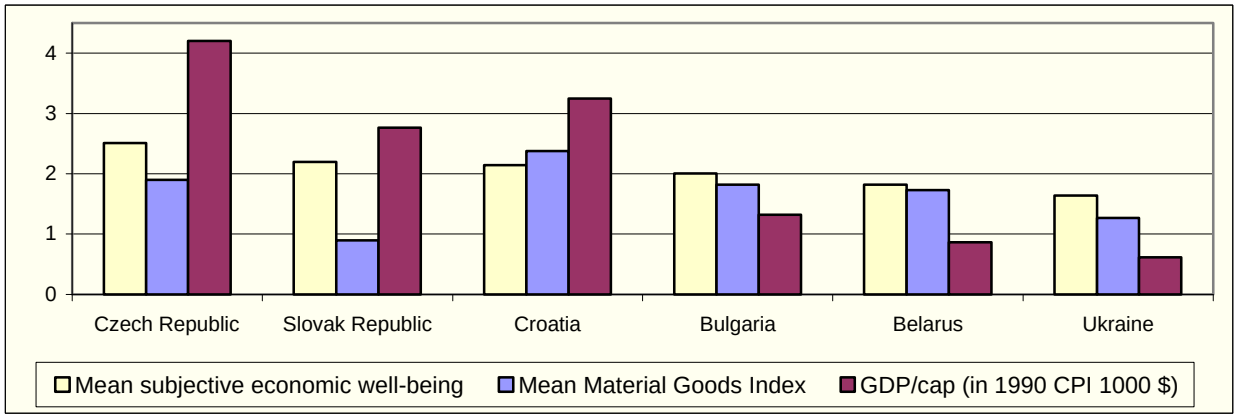


Source: New Democracies Barometer 1993, EBRD Transition Report 1998, own calculations.

Finally, in Figure 6 we compare the situation in 1995. Again, the Czech Republic shows the highest average subjective well-being and Ukraine shows the lowest. The most striking result is

the low value for the material goods index in Slovakia. As it is unlikely that a major destruction of wealth has taken place, this may point towards some problems with coding the values in the raw data.

Fig. 6: Subjective economic well-being, material goods index and GDP/cap in 1995



Source: New Democracies Barometer 1995, EBRD Transition Report 1998, own calculations.

Taking all this information together, we can derive correlation coefficients between these three variables (see Table 6). The correlation coefficients between subjective economic well-being and material goods index are positive during all times and lie between 0.2 and 0.3. If we exclude the doubtful material goods index value for Slovakia in 1995, we get a correlation coefficient of 0.63. The correlation between real GDP per capita and subjective economic well-being takes on an interesting time pattern. The pattern shows small correlation coefficients during the first years and then becomes very high in the last year.

Tab. 6: Correlations between average values of subjective well-being and objective indicators

	1992 (8 cases)	1993/94 (6 cases)	1995 (6 cases)
Subj. econ. well-being vs. Material goods index	0.30	0.20	0.25 (0.63)
Subj. econ. well-being vs. Real GDP/capita	0.06	0.02	0.95

Notes: Number in brackets gives correlation coefficient when leaving out Slovakia in 1995.

Our interpretation of this finding is employing GDP per capita does not give a very precise description of subjective economic well-being for cross-country comparisons during early stages

of transformation. First, there is evidence that the stage of economic progress itself may influence attitudes (Barnes 1982). Second, during economic change, deriving useful comparative macroeconomic measures is difficult. A major problem is the derivation of meaningful U.S. dollar values in a world of wildly fluctuating exchange rates and largely unknown commodity baskets to calculate purchasing power parities. Third, the size of the shadow economy may play a role, as it can drive a wedge between subjective and measured objective well-being. We would expect that these problems decline in line with transformation process and stabilisation of monetary conditions in the transition countries, and indeed, the correlation is very high in 1995. Hence during times when it is difficult to measure GDP meaningfully – which is also the case in many third world countries – using alternative indicators, such as the material goods index, may be very helpful.[9]

7. Summary and conclusion

In this paper, we analyse subjective economic well-being using survey data for a number of countries in Eastern Europe. Studying economic well-being instead of happiness has two advantages. The omitted variable problem will be much less severe, as the realm of economic well-being is much narrower than overall well-being. Moreover, studying sub-sections of overall well-being helps us to better understand the particular relationships between specific explanatory variables and well-being. Using the New Democracies Barometers, a large and unexplored survey database on Eastern European countries, we were able to establish a number of interesting results:
First, we find that subjective economic well-being correlates highly (ca. 50%) with overall life satisfaction of Eastern Europeans. This contributes to an established literature, which has shown economic aspects are important for people's happiness in Western countries.
Second, in an ordered logit model, we analyse determinants of subjective economic well-being and derive some important results:

[9] The World Bank provides an excellent tool for a detailed analysis of objective economic well-being (see Grosh and Glewwe 1998 for a brief introduction), namely the Living Standards Measurement Study (LSMS). With the help of these surveys, a much deeper understanding of living conditions can be gained than using, for instance, the NDB surveys. However, the NDB surveys cover many more countries in Eastern Europe, they allow to take developments over time into the analysis, and, which is the focus of this paper, provide the opportunity to study subjective economic well-being.

If a respondent considers his past to be much better than his current situation, he is more likely to report a relatively lower current well-being. If he expects to be better off in the future, he also considers himself to be better off today. Regarding the evaluation of the economic system of his country, we find that a more positive assessment of current and expected future economic system is associated positively with current well-being.

Turning toward objective indicators of economic well-being, we show higher values of the proxy for material wealth improve economic well-being. The same is true for respondents belonging to upper-middle and high-income quartiles.

Age has a u-shaped effect, with a minimum at 37 years. This age effect does not appear to be caused by cohort effects. Opposite to many studies on happiness, we do not find noticeable gender effects. This may indicate gender differences in happiness are not due to economic considerations. We get robust effects of education proxies, indicating higher educated people are more satisfied with their economic situation, even after controlling for income and wealth effects.

Moreover, the larger the settlement size people live in, the lower economic well-being. We attribute this finding to the greater wealth and income disparities in larger settlements and the adjustment of aspiration levels as a result.

Being married does not improve the economic situation of the respondent. This result differs from findings in the happiness literature, where married persons appear to be happier. In view of these differences, the happiness effect of marriage cannot be attributed to economic considerations over and above those being controlled in our analysis. People who are divorced or widowed display relatively lower economic well-being.

Third, economists typically use macro data for a description of the economic situation in Eastern Europe. The type of micro data we have used here can be an important addition to the conventionally used macro data. We argue in early stages of transformation, macro information, such as GDP per capita in US Dollars, may not be a very precise measure of subjective living conditions, while more recent data appears to be of better quality. Moreover, the measurement differences between objective and subjective indicators are not likely to be induced by common errors and thus they provide alternative views of the situation (Diener and Suh 1997).

Finally, the finding that there is no one-to-one correspondence between objective and subjective indicators of living conditions has potentially important policy implications. For instance, a booming economy may not affect people’s personal well-being if the expectation prevails that it is a temporary phenomenon and vice versa. Thus, an economic policy that ignores this aspect

could find it very hard to increase, for example, public support for introducing a market economy and democracy in the countries of transition. In the case that there are differences between the two concepts, the question of whether economic policy should use one or the other as its target is a difficult one, and an answer is beyond the scope of this paper. However, what needs to be emphasised is that policy makers should note, especially in times of economic turbulence, objective and subjective evaluations of economic well-being can differ considerably, and it is prudent to look at both before making a decision.

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