

Happiness in Transition Countries

Preliminary version

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Abstract

Since 1999, rapid growth in transition countries of Europe and Central Asia Region (ECA), driven primarily by productivity gains, has led to a dramatic increase in living standards and a sharp reduction in poverty. Out of a total regional population of about 475 million, about 50 million have moved out of poverty over 1998-99 and 2005-06. Gender issues related to these economic outcomes have not been widely studied in the transition countries of the ECA Region though some important pieces of research have indeed been undertaken in recent years.

In this paper we use the Life in Transition Survey (LiTS) dataset, a joint initiative of the European Bank for Reconstruction and Development (EBRD) and the World Bank, covering all the transition countries in the ECA Region. Using a multivariate regression method, we get findings in line with the literature for standard covariates, and interesting transition countries-specific results. Social capital and perceived change in social capital after the start of the transition is correlated with life satisfaction as well as preference for market economy and democracy make people happier after the transition. We also perform some sensitivity analysis which confirms general findings and unveils some country groups and gender specificities.

JEL classification: I31, I32, J16.

Keywords: Happiness; Transition; Gender; Europe and Central Asia.

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1 Introduction

Almost 20 years after the fall of the Berlin wall in 1989, many individuals in Central and Eastern Europe haven't completely adapted to the changes carried on by the transition to a market-oriented economy. Poverty increased initially because of the economic contraction, but later, after 1998, economic growth led to an increasing trend in household income and living standards. In 2006 average economic growth was 6.9 per cent in the region, the highest since the transition started. EBRD (2006) identifies the main reasons of rapid growth in a string domestic demand, remittances from workers abroad and an expansion of bank lending. On the other side, the first signals of overheating economies are visible in the inflation rate and external imbalances. After a first period of market-enabling reforms which are mostly completed everywhere in the region, the time of market-deepening and -sustaining reforms has started: it has taken the form of privatization and reforms in the financial sector, and of policies aimed at increasing competition.

This paper departs from the traditional economic literature focused on income, unemployment and earnings data to adopt a different perspective and use a subjective, self-reported assessment of life satisfaction as a measure of individuals' welfare. Recently, the rational view of economic agents taking decisions after rationally processing all the information available to maximize their utility has started to be questioned. Fundamental to this process was the concept of bounded rationality, according to which individuals have access to a limited set of information and make decisions using simple heuristic rules rather than complex optimization computations (Simon, 1978). Along the same lines, in a more recent work Daniel Kahneman (a psychologist awarded of the 2002 Nobel Prize in Economics) argues that the requirements of the economic rationality are quite impossible to be met by the human mind.

Research on the economics of happiness is a promising and complementary path: happiness is not identical to utility, though closely related, and it covers many aspects of human well-being, more than the standard concept of utility. As Frey and Stutzer (2002) point out, the use of happiness measures can provide a new way of evaluating the effects of government expenditures, it allows to face the issue of poverty definition, traditionally relying on disposable income, in a different way, by considering reported levels of happiness. The economics of happiness also gives new insights for economic theory. For example, unemployment has been considered both voluntary and involuntary, thus people decide to leave employment because of the burden represented by the number of hours of work or they consider it as an unfortunate event. Happiness studies suggest that unemployment reduces subjective well-being, thus it is in line with the view that unemployment is involuntary.

The aim of this paper is to provide new evidence on the determinants of happiness by using a unique data set on 27 transition countries in 2006. Special attention will be given to a gender perspective, and to changes in variables, other than standard individual characteristics, like social capital, the subjective ranking of household economic welfare. We get confirmation of previous studies' findings, but more importantly we find that social capital and self-perceived wealth ranking matters a lot for life satisfaction. Moreover, the effect of education and employment status is not the same across gender.

The rest of the paper is structured as follows: section 2 briefly summarizes the literature on happiness and transition countries, section 3 illustrates the data set at hand, section 4 explains some econometric issues common to happiness studies, section 5 contains the empirical methodology and the main findings, section 6 shows some sensitivity analysis and section 7 concludes.

2 Literature review¹

Starting from the very beginning, in 1749 Ludovico Antonio Muratori introduced the concept of "public happiness", and he interpreted public policy as devoted to find the best economic means to achieve the "public happiness" (Dixon, 1997). After that, the study of happiness was mainly practiced by psychologists, and only recently, in 1974, the psychological research was linked to economics with the contribution by Easterlin. He formulated the hypothesis that well-being depends on relative income rather than on its absolute value. Though its study was largely disregarded for a long time,

¹This literature review heavily draws from Sanfey and Teksoz (2007).

it is now having a large impact on this strand of research. The literature known as "economics of happiness" has now led to a number of significant contributions and surveys. Happiness is found to be positively correlated with education and income, and negatively with unemployment and bad health. Unexpectedly, happiness in industrialized countries does not seem to have increased much despite the humongous increase in real incomes and living standard (Blanchflower and Oswald, 2004; Layard, 2005). This evidence has been explained by adaptation theories, whereby individuals get used to new circumstances and adjust norms and expectations accordingly, and by the fact that people care more about their relative than to their absolute level of income, and by the notion of reference group. The extreme view of adaptation theory is the set point theory supported by psychologists which suggests that "*individuals have a set point of happiness and they revert back to even after major events*" (Graham, 2005). Furthermore, it is argued that "money buys happiness" since most contributions find a positive relationship between happiness and personal income, and this evidence is confirmed by studies using panel data and thus controlling for fixed effects, and by analysis of changes in happiness and changes in income. Other authors believe that "money does not buy happiness", or at least it has a weak effect on happiness. Their arguments are based on panel data evidence showing the dynamic relationship between the two variables is weaker than the cross sectional one and that the per capita income gap between rich and poor countries is not as large as the gap in life satisfaction.

The discrepancy between cross-section and over-time country-level studies is another paradox: after basic minimum needs are met, individuals do not seem to care about long-term improvements in per capita income or in living standards in assessing their well-being.

As noted by Sanfey and Teksoz (2007), the literature on transition countries is quite limited, usually focused on one country at a time probably because of the scarcity of subjective data for developing and transition countries (Frey and Stutzer, 2002). In the world database of happiness (by Veenhoven), transition countries are at the bottom of the happiness ranking out of 68 countries in mid-90s, where happiness is defined by how much people enjoy their life as a whole. Helliwell (2002) find that subjective well-being was very low in 1990 and in the mid-90s in the Former Soviet Union, whereas Eastern Europe started even lower than FSU, but improved significantly. Hayo and Seifert (2003) investigate the determinants of subjective economic well-being in 10 Eastern /European countries from 1991 to 1995 by means of an ordered logit model. They find a negative and U-shaped age effect, a positive impact of education and relative income position, and a negative effect of unemployment. They also compare indicators of objective and subjective well-being at a macro level and find that using a standard macro variable, such as real GDP per capita, for cross country comparisons in well-being may be misleading in the early stage of transition. Other papers examine happiness in specific countries, and some of them focus on Russia. Veenhoven (2001) and Graham, Eggers and Sukhtankar (2004) find Russians highly unhappy, and the latter find also a significant impact of education on happiness, a U-shaped age effect. Senik (2004) validates Hirschman's (1973) tunnel effect hypothesis, whereby individuals' satisfaction is not affected by variables reflecting the income distribution via social comparison, but it seems to be influenced by individuals' information which is used to form expectations. It is also found that self-employed are happier than waged workers, as opposed to what emerges from Latin America (Graham, 2004). Namazie and Sanfey (2001) use 1993 data on Kyrgyzstan and find that unhappiness is higher among older people, unemployed and divorced. They do not find support for a significant effect of gender and education, and satisfaction seems to decline with age. Finally, Sanfey and Teksoz (2007) analyze life satisfaction in transition countries using data from the World Values Survey. Transition countries have on average lower values of life satisfaction than non-transition countries, and across time life satisfaction levels have returned close to pre-transition levels in a sub sample of transition economies. They also support standard findings in the literature, i.e. happiness increase with education and income, and declines with age until the early-50s and then it recovers slowly. They find evidence that self-employed are happier than waged workers, and economic governance and inequality positively and negatively affects happiness.

3 Data

Our data come from the Life in Transition survey (LITS), a joint initiative of the European Bank for Reconstruction and Development and the World Bank, carried out between August and October 2006 and devoted to provide a comparable and *"comprehensive assessment of relationships among life satisfaction and living standards, poverty and inequality, trust in state institutions, satisfaction with public services, attitudes to a market economy and democracy and to provide valuable insights into how transition has affected the lives of people across a region comprising 16 countries in Central and Eastern Europe ("CEE") and 11 in the Commonwealth of Independent State ("CIS"). Turkey and Mongolia and were also included in the survey"*² (LITS Report, 2006). We exclude from our analysis Mongolia because it is not an ECA country and it was included in the survey as an EBRD client country, and Turkey since it does not qualify as transition country.

The main goal of the survey was to assess the impact of transition on people in the Eastern Europe and Central Asia (ECA) Region, and the questionnaire was administered to 29,000 households (interviewed face-to-face, 1,000 for each country) in order to have a nationally representative sample. In each household the head was asked about the household composition and its expenses, and one other member aged 18 or above, using the last birthday rule, was interviewed about satisfaction and attitudes toward economic and political reforms and on public service delivery, about past (from 1989) and current activities in order to capture individual ways of coping with transition and socioeconomic changes, about the way crime and corruption affect people's lives, and the extent to which trust in other people and in state institutions (which we can name social capital) has changed. In case the head of the household was also the last birthday respondent, only one person per household was interviewed during the survey. We use age and gender of respondents to the second set of questions since one of the sections in the second part of the questionnaire contains the question on life satisfaction which is the dependent variable in our analysis. We have also information on household expenditures, both on durables and on food items, reported by the household head or the most knowledgeable household member. In order to have a comparable measure across country, we use OECD-equivalized and purchasing power parity adjusted expenditure. Though in some cases the sampling methodology had to be changed to suit the availability, depth and quality of PSU (primary sampling unit), as well as local operational issues, it was the following in each country: from the sample frame of primary sampling units, 50 units were selected, and within each unit 20 households which lead to 1,000 interviews per country. Within each household, 1 or 2 respondents were sampled.

4 Econometric issue with life satisfaction

Happiness surveys usually contain questions like "Generally speaking, how happy are you with your life?" or "How satisfied are you with your life?" with answers on a four-to-seven point scale. Our analysis focuses on studying subjective well-being, and as explained above, the dependent variable is the evaluation of the current life satisfaction of a family respondent. The original question³ is *"To what extent do you agree with the following statement: All things considered, I am satisfied with my life now. Strongly disagree (1), Disagree (2), Neither disagree nor agree (3), Agree (4), Strongly agree (5), Not applicable (6), Don't know (7)"*. We have to say that answers to happiness and life satisfaction questions are quite strongly correlated: research on British data for 1975-92 and on Latin-America for 2000-01 find a correlation between 0.56 and 0.50 (Graham, 2004). Moreover, happiness questions should be asked at the beginning of a survey in order to minimize order bias; but as any economic measurements, any answer might be biased by idiosyncratic, unobserved events, as well as by unobserved personality traits and correlated measurement errors. The relevance of errors due to the order of questions, the wording, scales applied, mood depends on the use which one intends to do

²The countries are: Albania, Armenia, Azerbaijan, Belarus, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, Estonia, Former Yugoslav Republic of Macedonia (FYROM), Georgia, Hungary, Kazakhstan, Kyrgyz Republic, Latvia, Lithuania, Moldova, Mongolia, Poland, Romania, Russia, Turkey

³Out of a total of 27,000 observations (excluding Mongolia and Turkey), 26,414 individuals do answer the life satisfaction question.

of the data. If the objective is to analyze the determinants of happiness, we do not need to assume that reported happiness is cardinally measurable or interpersonally comparable (Frey and Stutzer, 2002). Subjective answers can be treated ordinally, and higher reported happiness reflects higher happiness of the individual. A recent study by Kahneman and Krueger (2006) goes further in the distinction between decision utility and experienced utility, the first implying a perfect continuity between preference and choice, and introduces the concept of remembered utility: the latter is the way people remember their experiences after they are over, whereas experienced utility is the way people feel about experiences in real-time. Thus, surveys usually collect reports of life satisfaction and happiness as global retrospective assessments, whereas measures collected in real time or linked to diaries of actual events can minimize the filter of memory.

Given that reported subjective well-being consistently and adequately measure human well-being, it can be modeled in a micro-econometric happiness function. Measurement errors and unobserved characteristics are captured by the error term, and are the sources of potential biases. A measurement error can lead to inferences distorted by unobserved personality characteristics which affect individuals' socio-demographic and socio-economic features as well as the way they answer happiness questions. Another potentially biasing factor is represented by the correlation between measurement errors and individual characteristics. While measurement error can be overcome with the use of panel data, the second issue can hardly be solved by econometric techniques.

Also the direction of causality is not clear: it is not known whether policies, environments, character traits drive negative assessments of policies. It might be that unhappy people are more likely to be pessimistic about the future and concerned about relative income differences.

5 Some stylized facts

Figure 1 shows the share of individuals who answered they either disagree or agree with the statement "I am satisfied with my life now" by age groups: the share of people satisfied with life decreases over age whereas the share of people who disagree with the above mentioned statement increases. We also observe a slight increase in the share of those who agree with the statement in the over 70 age group, as if there were a U-shaped relationship. Figure 2 graphs the same shares by group of countries and unveils a quite high spatial heterogeneity: EU member countries have higher share of happy people compared for example to CIS low-income countries.

We also provide some descriptive evidence on the overall satisfaction with life of people in ECA Region, correlating with income, consumption, age, ethnicity and other important factors. Figure 3 shows a correlation between 2005 PPP-adjusted per capita GNP and the share of people who are either satisfied or very satisfied with their lives for 27 ECA countries. We find a positive correlation of 0.31, as shown by a positively sloped linear fit. This apparent positive linear relationship between income level and satisfaction is not consistent across all the countries, as we find in figure 4. There is a positive correlation between income level and overall satisfaction with life in all the countries except for CIS low-income countries. The average per capita GDP level in CIS low-income region is the lowest among the ECA Region. We find that a larger share of people is satisfied with life in the poorest and richest countries as compared to the middle income countries. In figure 5 we show a fractional polynomial fit, which calculates the prediction for population shares that are either satisfied or very satisfied with their lives based on the estimation of a fractional polynomial of per capita GNI and plots the resulting curve. The degree of fit in fractional polynomial projection is 0.48 as opposed to the linear projection of 0.1 (figure 3). Figure 5 depicts some non-linearity between income level and overall satisfaction with life. This U-shaped curve certainly provokes further investigation but it also assumes that the average income of a randomly chosen sample of 1,000 people from a country represents the per capita GNI of that country, which is debatable.

The LiTS dataset does not have any information on the income level of a household, but it asks the minimum amount of money that a household would need to make ends meet at the end of each month. To get a clearer picture of the relationship between income and satisfaction in life, we use this basic consumption expenditure level of each household as a proxy for their income level. In figure 6 we find similar evidence of a U-shaped relationship (a little flatter) between monthly consumption

expenditure and overall satisfaction with life based on a fractional polynomial fit of degree 0.26.

We find that the average monthly consumption level varies significantly across these countries (e.g. Slovenia has 1,121.71 dollars as compared to Uzbekistan's 195.38 dollars). Also, the standard deviation is as low as 97.8 dollars (in Tajikistan) against as high as 881.1 dollars (in Latvia). This is shown in figure 7. Countries with higher average monthly consumption level have higher standard deviation. Similarly, countries with lower average monthly consumption level have lower standard deviation. As we move from poorer to richer countries, the standard deviation of consumption expenditure, a crude measure of inequality, increases.

We calculate coefficient of variation of monthly consumption expenditure, which gives us a reasonable and better comparator of inequality across countries. The lower value of this measure indicates lesser degree of inequality in terms of monthly consumption expenditure level. In figure 8 we show the relationship between consumption inequality and share of people satisfied with life. There is evidence that higher inequality lowers the share of people satisfied with life in all the regions except in EU countries, where there is almost no correlation between these two factors. On the inequality scale Balkan countries, on average, are at the lower end whereas CIS middle-income countries are at the higher end. In CIS low-income region, there is a clear distinction between countries with low and high inequality. In EU region, countries are evenly spread out on this inequality scale. Overall, there is no relationship between the level of inequality and overall satisfaction with life if we consider all the regions together (figure 9), but within each region we find some interesting evidence (figure 8). In CIS low-income countries it is mostly evident that higher inequality leads to lower satisfaction with life.

Certain caveats are worth mentioning. These cross-country comparisons suffer from regional or country specific bias in consumption patterns, ethnicity and most importantly in subjective answers. A three on a five satisfaction with life scale in Hungary may be equivalent to a four on a five scale answer in Tajikistan, which seriously undermines a cross-country correlation of satisfaction with life and any other factor. It is beyond the scope of this paper to correct this subjective bias but we do a number of consistency and robustness checks to validate our findings to the best possible extent.

Based on the level of consumption expenditure, we divide the sample population in each country into three groups: rich (the top 33%), middle (middle 33%) and poor (bottom 33%). Presumably, there is less subjective bias if we compare the average level of satisfaction of the bottom 33% and top 33% of the sample population within a country. We perform an equality of mean test to see if average satisfaction with life of top 33% (rich) is significantly higher than average satisfaction of bottom 33% (poor) in the same country. Uzbekistan being the only exception, the mean difference of overall satisfaction with life between the poor and the rich is significant at 5% or lower in all countries.

The positive relationship between consumption level and overall satisfaction in life is robust and statistically significant within each country with a varying degree. Also subjective bias in the opinion is expectedly less an issue here since we are only comparing people from the same country. Next, we plot the percentage of top and bottom 33% consumption groups who are satisfied or very satisfied with life by region and country (figure 10). We find consistent evidence that a larger share of the top 33% consumption group is satisfied or very satisfied with life across all countries. It is interesting to note that the percentage point difference between these two groups in overall satisfaction with life varies from 2.8% (in Moldova) to 34.6% (in Kazakhstan).

Finally we look at the relationship between percentage point difference between the poor and the rich satisfied with life and the population share being satisfied with life. We plot linear and fractional polynomial fit, both showing a negative relationship, with the exception of Moldova, which is clearly an outlier. A higher percentage point difference between the poor and the rich being satisfied with life indicates the presence of a negative correlation between inequality (consumption expenditure in this case) and satisfaction in life within a country.

In figure 11 we find that on average the population share of people who overall are satisfied with life is lower in a country where this perception of satisfaction between the poor and the rich differs to a greater extent. Thus we find that within a country both consumption expenditure (income) level and inequality are significantly related to satisfaction with life. A cross-country analysis failed to produce similar outcomes at least in the bivariate context.

Respondents were also asked about their relative position on a ten-step ladder where at the bottom,

the first step, stand the poorest people and at the top, the tenth step, stand the richest. We compare the perception of their well-being on this ten-scale ladder with their self-reported overall satisfaction with life. We also compare their subjective opinion about well-being and respective consumption expenditure level. This in other words is a consistency check whether rich and poor in terms of consumption expenditure reveal their relative position within a particular country. The coefficient of correlation is significant at 1 percent for all countries. In most of the countries the degree of association between satisfaction in life and the own perception about their well-being in the society is between 30 to 40 percent. Provided that respondents reflect the subjective bias consistently in answering both questions, we expect a lower degree of subjective bias in this outcome since we compare the correlation of two subjective answers between people within a country. In other words, going back to our previous example, suppose a three on a five-step life satisfaction scale in Hungary is equivalent to a four on a similar scale answer in Tajikistan, if the same person in Hungary scores six on a ten-step of well-being scale, then we expect the same person in Tajikistan to score above six on the ladder of well-being scale, unless people are very inconsistent between these two answers. A positive correlation does not necessarily mean that higher level of consumption (income) is the soul cause for overall satisfaction in life; it only suggests a possibility of a relation between income and satisfaction.

6 Empirical specification and findings

In order to explore the determinants of life satisfaction (on a 1 to 5 point scale), we estimate a series of equations. We assume that self-reported life satisfaction scores (ordinal rather than cardinal) are a function of individual level variables when we control for countries fixed effects (by adding a series of dummies), and thus estimate the following equations:

$$y_i^* = x_i' \beta + \epsilon_i \quad (1)$$

$$y_i = j \quad \text{if} \quad \gamma_{j-1} < y_i^* \leq \gamma_j \quad (2)$$

for unknown γ_j s with $\gamma_0 = -\infty$ and $\gamma_M = \infty$. The probability that alternative j is chosen is the probability that the latent variable y_i^* is between two boundaries γ_{j-1} and γ_j . We assume that ϵ_i is i.i.d. standard normal, and thus we get an ordered probit model. It is straightforward to derive the conditional distribution of y_i given x_i , in a three alternative case, as follows:

$$P(y_i = 1|x_i) = P(y_i^* \leq 0|x_i) = \Phi(-x_i' \beta), \quad (3)$$

$$P(y_i = 3|x_i) = P(y_i^* > \gamma|x_i) = 1 - \Phi(\gamma - x_i' \beta), \quad (4)$$

$$P(y_i = 2|x_i) = \Phi(\gamma - x_i' \beta) - \Phi(-x_i' \beta). \quad (5)$$

In such a model, we remind that the direction of the effect of x_k on the probability $P(y_i = 1|x_i)$ and $P(y_i = J|x_i)$ is uniquely determined by the sign of β_k , but it does not always determine the direction of the effect for the intermediate outcomes, $1, 2, \dots, J - 1$ (Wooldridge, 2002). In order to get the correct magnitude and directional effect of x_k on the response probabilities, we also compute marginal effects as follows:

$$\partial p_1(x)/\partial x_k = -\beta_k \phi(\gamma_1 - x\beta) \quad (6)$$

$$\partial p_J(x)/\partial x_k = \beta_k \phi(\gamma_J - x\beta) \quad (7)$$

$$\partial p_j(x)/\partial x_k = \beta_k [\phi(\gamma_{j-1} - x\beta) - \phi(\gamma_j - x\beta)], \quad 0 < j < J. \quad (8)$$

We include the following microeconomic variables: age, age squared (or a set of age dummies), gender, educational attainment, quintile of household expenditure, dummies for employment status (waged worker, self-employed, student, retiree, homemaker, and other inactive), dummies for location of residence (urban, rural, metropolitan area), a dummy for whether an individual found a job in the field where he got his higher qualification (which can be interpreted as a proxy for job satisfaction), a dummy for having a child in the previous year, health status, a set of dummies for trust in other people (which we interpret as social capital), a dummy for preference for democracy and a dummy for preference for market economy, and a variable indicating the change in trust in people and the change in self-perceived decile ranking, a dummy for individuals who did better than peers (namely high school mates, and colleagues in 1989), a dummy for dwelling's owners and one for whether transfers (like unemployment benefits, social benefits provided by the state or by the community, help from charities and NGO) are the main source of livelihood for the household. We estimate an ordered probit model with four different specifications which are intended to separate out standard findings (the first one) from those deriving from survey- and transition-specific set of variables (the second, the third, and the fourth). The first specification, in line with the literature, includes individual characteristics like age, gender, educational attainment, employment and health status, location of residence, household expenditure (PPP-adjusted) quintiles (given that the survey does not contain information on income). The second specification includes dummies capturing a preference for democracy and market economy, which given the transition process should make people happier, a dummy for whether individuals own the dwelling they live in, and a dummy for whether transfers are the main source of livelihood for the household. The third specification adds variables which capture changes typical of transition countries: they are the change in self-perceived wealth decile ranking and the change in trust in other people (that we interpret as a proxy for social capital). Because of a quite high item non-response for some variables, we decide to exclude some interesting covariates from the main analysis: they are the dummy for having a child in 2005, the dummy which can be interpreted as a proxy for job satisfaction and two categorical variables for having done better than peers. We present the findings from the complete specification in a separate column (assuming that item non-response is ignorable), and we suggest to interpret those with care because of the low number of observations used.

Table 1 illustrates the four specifications with a second degree polynomial in age, while table 2 has a set of age dummies. Age has a negative effect on life satisfaction and enters non-linearly given that the quadratic term is significantly different from zero and it is positive. We find that happiness reaches the minimum at around age 67 when it start increasing again to reach higher levels than those observed at younger ages. Household expenditure turns out significant: it positively affects individuals' happiness in line with our preliminary evidence and with the literature. Employment status enters in the form of dummy variables: waged worker, self-employed, student, retiree, homemaker and other inactive which is the reference category. Being a waged worker or a self-employed positively affects happiness, as well as being a student, a retiree or a homemaker as relative to be in the reference category (other than students, retirees and homemakers, that means unemployed and inactive). Education raises life satisfaction, whereas living in urban and metropolitan areas decreases it compared to living in rural areas (though the effect of urban areas is not significant in model 2 and 3). The last "standard" individual characteristic is health status: the reference category is very good health, thus any other reported health status has, as expected, a negative impact on happiness. Columns 2 and 3 includes additional variables: the first is a set of five dummy variables for whether most people can be trusted or not, followed by two dummies capturing a preference for democracy and for market economy relative to other political and economic systems (the comparison in the survey was an authoritarian government and a planned economy respectively, like those before the transition⁴), by a dummy for whether individuals own the dwelling and for whether transfers are the main source of livelihood, and two variables capturing changes over time since transition. Individuals who trust other people are happier than those with less or no trust at all (complete distrust is the reference category). Along the same line, people who prefer a market economy and democracy turn out to be more satisfied with their life in general. Thus, people who easily adapted themselves to the new political

⁴Individuals who answered they are indifferent between a market and a planned economy or between an authoritarian and a democratic system are reclassified as missing.

and economic environment, either in the form of trusting people in general rather than being very careful when dealing with others like under the Communist regime, or revealing a clear preference for the renovated institutions that the transition has brought, are happier. Individuals, who are owners of the dwelling they live in, are happier as those whose main source of income is not transfers, that is they derive most of their income from a waged or independent job, from social security benefits, from bartering of farm products, investment or savings. The last two variables are inserted to capture the effect on happiness today of changes happened after the transition started. The first is the change in trust of people between 1989 and 2006, while the second is the change in self-perceived wealth decile ranking over the same time span. They are computed as the difference of two categorical variables, therefore if they are positive, it means an increase in trust or a self-perceived upward moving in the wealth distribution. They both have the expected positive sign, but only the change in self-perceived wealth decile ranking is statistically significant. The age dummies specification leads to very similar results.

7 Sensitivity analysis

In this section, we show results from the analysis conducted separately by group of countries and by gender in order to check the sensitivity of our main findings to geographical areas and gender specificities. Table 3 shows the output of model M3 by group of countries: the groups are European Union member states⁵, South East European countries⁶, CIS low-income⁷ and CIS middle-income countries⁸, and other countries⁹. The directional effect of age is the same observed in the whole sample, though age is not significant in the CIS low-income group. The dummy variable for males turns out to be significant in two groups out of five and with opposite sign: males are less happy than females in South East European countries, whereas the opposite is true in the group we named others (Bulgaria and Romania). The sign of the coefficients attached to expenditure quintiles indicates that individuals who belong to higher quintiles are happier than those in the poorest quintile: this finding does not hold for CIS middle-income countries, while for CIS low-income and other countries it holds respectively only for the upper two and the highest quintile. A similar result holds for educational attainments: more educated people are happier, but that is not true everywhere, and this happens in CIS and other countries. The last main different result concerns the dummy for changes in trust of people: it is significant for every group of countries except for others, and the sign is negative only in CIS low-income countries. We also test equality of coefficients across groups of countries, and we find that the quadratic term in age has different coefficients, and the same is true for expenditure quintiles, the dummy for self-employed, location of residence, good health, some trust in people, preference for a market economy, and the two variables capturing changes over time. The position in the expenditure (as a proxy of the income) distribution, and the geographical location does not lead to the same level of happiness across groups of countries, and at the same time, even the changes brought by the political-economic transition do not guarantee the same level of happiness everywhere probably because the transition did not start in every country at exactly the same time and changes in people's attitudes, social behaviors and self-perception usually need a long time to be completed.

Table 4 illustrates model M3 estimated for males and females separately. Overall, the sign of the coefficients confirms the findings from the whole sample, and tests of equality of coefficients across equations reveals that the differences are in coefficients attached to employment status dummies (waged worker, self-employed and homemaker), to education dummies (primary and secondary education), to the dummy for good health, to the dummy for some distrust in people, and to the dummy for preference for market economy.

⁵Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovakia, Slovenia.

⁶Albania, Bosnia, Croatia, Macedonia, Montenegro, Serbia.

⁷Armenia, Azerbaijan, Kyrgyz Republic, Georgia, Moldova, Tajikistan, Uzbekistan.

⁸Belarus, Kazakhstan, Russia, Ukraine.

⁹Bulgaria, Romania were not classified as EU member states because they joined the EU on January 1st2007.

8 Conclusion

This study is among the first to investigate life satisfaction in a range of transition countries using individual level data. Unfortunately we have only the first wave of LiTS data and therefore we cannot document changes in happiness after the transition started, anyhow we observe that life satisfaction has a U-shaped pattern with age and is very heterogeneous across transition countries. The standard positive correlation between happiness and income does hold overall but not in each transition country: in fact in the CIS low-income region, the relation is negative. We also find a negative bivariate relationship between happiness and inequality, but once more this is not true everywhere: for example in EU member states we do not find evidence of any significant correlation between the two variables, and at the same time the relation does not hold overall for the ECA Region. Given the possibly high level of regional or country specific bias in consumption patterns, ethnicity and in subjective answers, we perform further tests of bivariate relationship which confirm the positive association between income and happiness.

Leaving apart standard findings relative to age, employment and health status, education, etc., the analysis carried out has few, and we think, important policy messages. People who easily adapt to the new political and economic environment, either because they trust people in general rather than being very careful when they deal with others (like under the Communist regime), or because they have a clear preference for the renovated institutions that the transition has brought, are happier. Thus, building and consolidating institutions which can increase confidence of people and trust in each other like an efficient and uncorrupt police, courts, banks, government and parliament, or an effective bureaucracy which helps individuals reaching their objectives, might have the effect of increasing what is known as social capital and therefore a country welfare.

Secondly, the change in self-perceived wealth decile ranking has the same statistically significant impact overall and in each group of countries. This finding confirms that keeping every else fixed, moving up along the self-perceived wealth ranking makes people feeling more satisfied.

Finally, educational attainments and employment status do not have the same correlation with happiness for males and females: that means being more educated or employed does not entail an effect of the same size for people of different gender. For example, when deciding how much money the government should spend on education for males and females to increase the welfare of a country, it should be reminded that in transition countries the effect on individuals' life satisfaction is not the same by gender.

References

- [1] Bertrand, M. and Mullainathan, S. (2004) "Do people mean what they say? Implications for subjective survey data", *American Economic Review*, 91:67-72.
- [2] Blanchflower, D. and Oswald, A.J. (2004) "Well-being over time in Britain and the USA", *Journal of Public Economics*, 4:341-372.
- [3] Di Tella, R., MacCulloch, R. and Oswald, A.J. (2003) "Preferences over inflation and unemployment: Evidence from surveys of happiness", *American Economic Review*, 91:335-341.
- [4] Dixon, H.D. (1997) "Editorial Note", *Economic Journal*, 107:1812-1814.
- [5] Easterlin, R. (1974) "Does economic growth improve the human lot? Some empirical evidence", in David, P.A. and Reder, M.W. (eds.), *Nations and Households in Economic Growth: Essays in Honour of Moses Abramowitz*, New York and London, Academic Press, 89-125.
- [6] EBRD (2006) "Transition Report 2006: Finance in Transition", London: EBRD.
- [7] Frey, B.S. and Stutzer, A. (2002) "What can economists learn from happiness research?", *Journal of Economic Literature*, 40:402-435.
- [8] Graham, C. (2004) "The Economics of Happiness", in Durlauf, S. and Blume, L. (eds.), *The New Palgrave Dictionary of Economics*, Second Edition.
- [9] Graham, C. (2005) "Insights on Development from the Economics of Happiness", *The World Bank Research Observer*, 20:201-231.
- [10] Graham, C. and Felton, A. (2006) "Inequality and happiness: Insights from Latin America", *Journal of Economic Inequality*, 4:107-122.
- [11] Graham, C., Eggers, A. and Sukhtankar, S. (2004) "Does happiness pay? An exploration based on panel data from Russia", *Journal of Economic Behavior and Organization*, 55:319-342.
- [12] Hayo, B. and Seifert, W. (2003) "Subjective well-being in Eastern Europe", *Journal of Economic Psychology*, 24:329-348.
- [13] Helliwell, J.F. (2002) "How's life? Combining individual and national variables to explain subjective well-being", *NBER Working Paper No. 9065*, Cambridge, MA: NBER, <http://papers.nber.org/papers/w9065>.
- [14] Hirschman, A.O. (1973) " ", *Quarterly Journal of Economics* 87:544-566.
- [15] Layard, P.R.G. (2005) "Happiness: Lessons from a New Science", London: Allen Lane.
- [16] LITS Report (2006) "A brief report on observations, experiences and methodology from the survey", Report prepared by Synovate for the EBRD.
- [17] Namazie, C. and Sanfey, P. (2001) "Happiness and transition: The case of Kyrgyzstan", *Review of Development Economics*, 5:392-405. .
- [18] Oswald, A.J. (1997) "Happiness and economic performance", *Economic Journal*, 107:1815-1831.
- [19] Sanfey, P. and Teksoz, U. (2007) "Does transition make you happy?", *Economic of Transition*, 15:707-731.
- [20] Senik, C. (2004) "When information dominates comparison: A panel data analysis using Russian subjective data", *Journal of Public Economics*, 88:2099-2123. .
- [21] Simon, H. (1978) "Rationality as a Process and Product of Thought", *American Economic Review*, 68:1-16.

- [22] Veenhoven, R. (2000) "Freedom and happiness: A comparative study in 44 nations in the early 1990's", in Diener, E. and Suh, E. (eds.), *Culture and Subjective Well-being*, Cambridge, MA: MIT Press, 257-288.
- [23] Veenhoven, R. (2001) "Are the Russian as unhappy as they say they are? Comparability of self-reports across nations", *Journal of Happiness Studies*, 2:111-136. .

Figure 1: Life satisfaction by age group

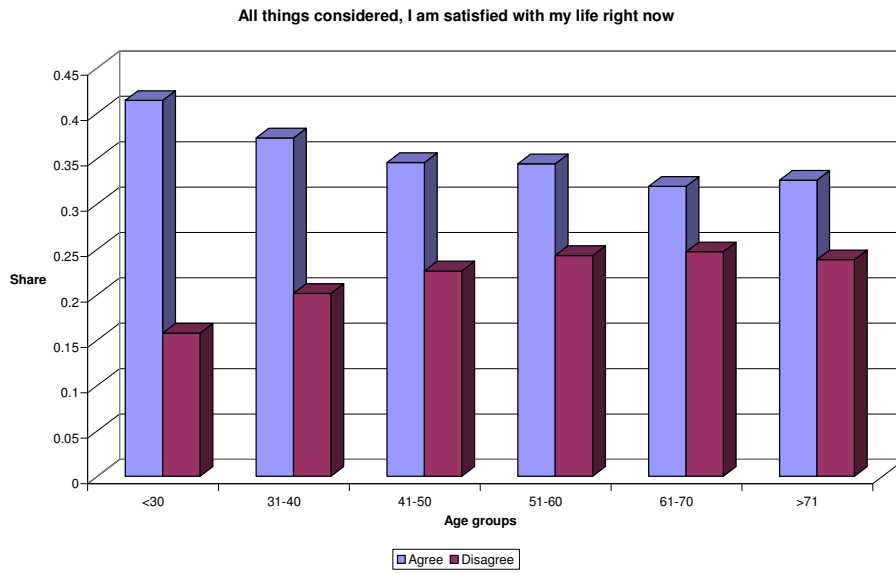


Figure 2: Life satisfaction by country group

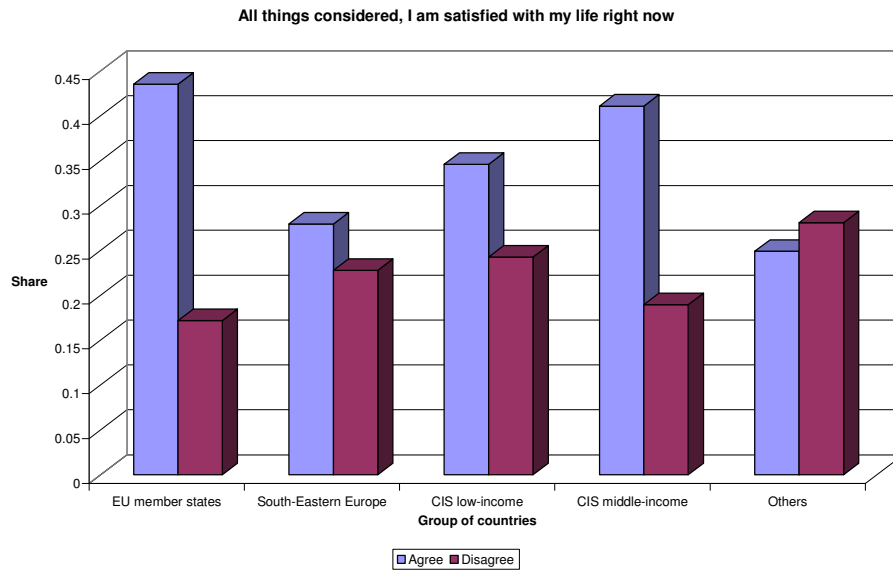


Figure 3: Per capita GNP and population share being satisfied or very satisfied with life, linear fit

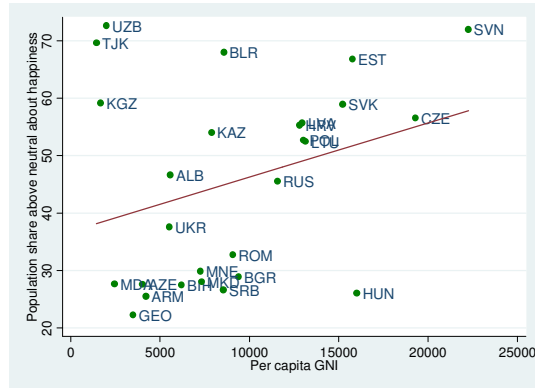


Figure 4: Per capita GNP and population share being satisfied or very satisfied with life by regions

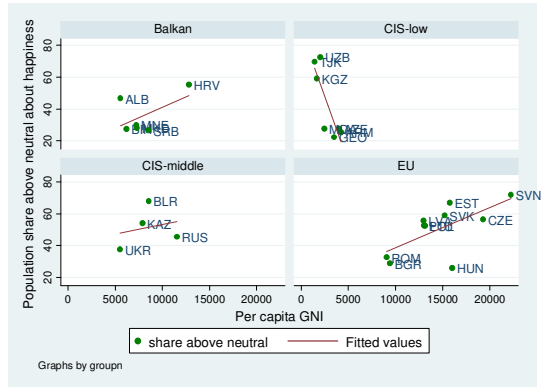


Figure 5: Per capita GNP and population share being satisfied or very satisfied with life, non-linear fit

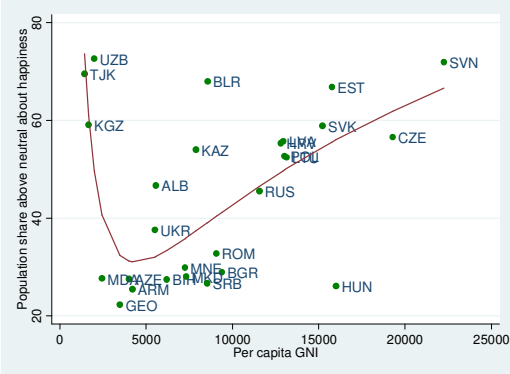


Figure 6: Average monthly consumption expenditure and population share being satisfied or very satisfied with life, non-linear fit

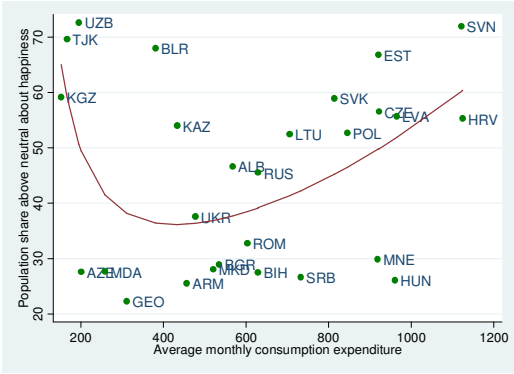


Figure 7: Monthly Consumption level, Mean and Standard Deviation

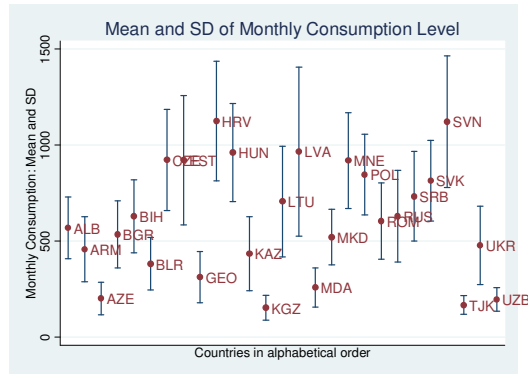


Figure 8: CV of monthly consumption expenditure and population share being satisfied or very satisfied with life, linear fit by region

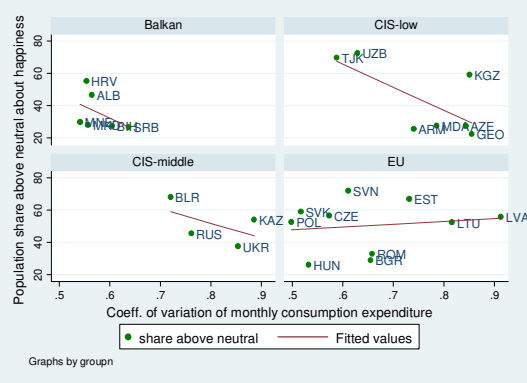


Figure 9: CV of monthly consumption expenditure and population share being satisfied or very satisfied with life, non-linear fit

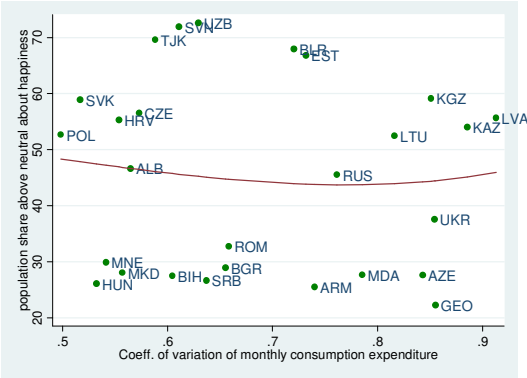


Figure 10: Percentage of Poor and Rich satisfied with life, by region and country

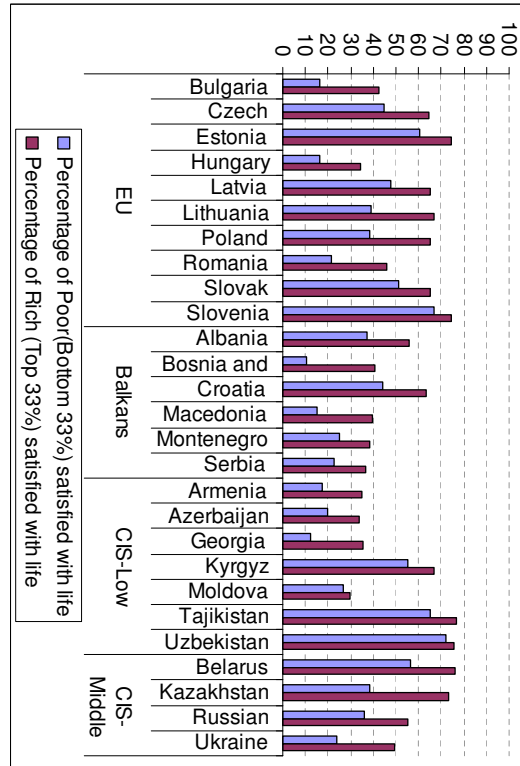


Figure 11: Percentage gap between Poor and Rich satisfied with life and population share being satisfied or very satisfied with life

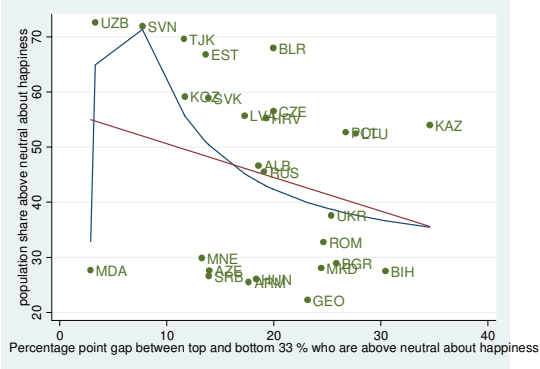


Figure 12: Percentage Poor, Rich and population share being satisfied with life on a ten scale ladder of well-being

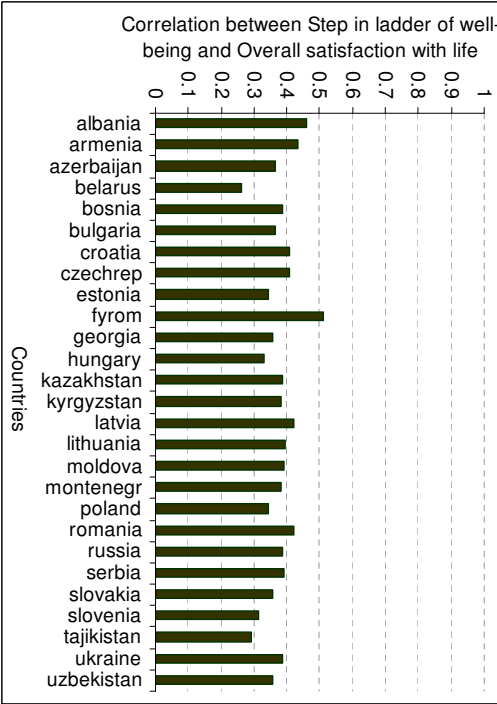


Table 1: Ordered probit results, quadratic polynomial in age specification

	M1	M2	M3	M4
	(1)	(2)	(3)	(4)
Age	-.024***	-.024***	-.015***	-.001
Age squared	.0003***	.0003***	.0002***	.00002
Gender	.0001	-.005	.004	-.002
Expenditure				
2 quintile	.166***	.154***	.167***	.123*
3 quintile	.252***	.239***	.242***	.148**
4 quintile	.429***	.401***	.379***	.196***
5 quintile	.563***	.535***	.489***	.182**
Employment status				
Waged worker	.123***	.086***	.082***	.073
Self-employed	.235***	.197***	.196***	.139**
Student	.260***	.212***	.244***	1.051
Retiree	.151***	.132***	.143***	.152
Homeworker	.233***	.215***	.181***	.255***
Education				
Primary	-.020	-.044	-.016	-.004
Secondary general	.077**	.037	.100**	.119
Secondary vocational	.024	-.017	.053	.094
Tertiary	.203***	.128***	.188***	.123
Post-grad	.348***	.244***	.285***	.240
Area				
Urban	-.034**	-.012	-.005	.071*
Metropolitan	-.112***	-.092***	-.091***	.009
Health status				
good	-.179***	-.172***	-.146***	-.224***
medium	-.407***	-.367***	-.302***	-.410***
bad	-.733***	-.669***	-.585***	-.625***
very bad	-1.065***	-.988***	-.867***	-.963***
Trust in people				
Some distrust		.217***	.218***	.104**
Neither trust nor distrust		.310***	.270***	.191***
Some trust		.455***	.411***	.354***
Complete trust		.573***	.518***	.405***
Preferences for institutions				
Like democracy		.122***	.127***	.073*
Like market economy		.108***	.073***	.078**
Household owns the dwelling		.127***	.135***	.111*
Transfers are the main source of livelihood		-.240***	-.214***	-.093
Changes				
Change in trust in people 2006-1989: $\hat{\alpha}_0 = \hat{\alpha}_1$ increase in trust			.015**	.011
Change in self-perceived wealth decile ranking 1989-2006: $\hat{\alpha}_0 = \hat{\alpha}_1$ move upward			.126***	.109***
Job satisfaction				-.008
had a child (birth or adoption) in 2005				-.071
Done better than peers (high school mates)				.251***
Done better than peers (colleagues in 1989)				.239***
cut1:-cons	-1.944***	-1.564***	-1.306***	.084
cut2:-cons	-1.022***	-.616***	-.310***	1.108***
cut3:-cons	-.344***	.079	.427***	1.885***
cut4:-cons	1.075***	1.521***	1.912***	3.447***
Obs.	26402	26367	21137	4134
e(ll)	-35874.15	-35313.11	-27724.04	-5138.845
χ^2 statistic	6411.8	7435.553	7339.778	1935.827
e(r2-p)	.082	.095	.117	.158

Table 2: Ordered probit results, age dummies specification

	M1	M2	M3	M4
	(1)	(2)	(3)	(4)
31-40	-.108***	-.108***	-.050*	-.020
41-50	-.125***	-.146***	-.056**	-.019
51-60	-.086***	-.109***	-.009	-.067
61-70	.024	-.0003	.113***	-.025
≥ 70	.147***	.114***	.219***	.014
Gender	-.001	-.007	.002	-.0001
Expenditure				
2 quintile	.167***	.154***	.167***	.124*
3 quintile	.252***	.239***	.241***	.147**
4 quintile	.426***	.399***	.375***	.195***
5 quintile	.562***	.534***	.487***	.181**
Employment status				
Waged worker	.122***	.085***	.084***	.073
Self-employed	.233***	.194***	.198***	.140**
Student	.295***	.251***	.257***	1.040
Retiree	.139***	.115***	.131***	.159
Homeworker	.231***	.212***	.180***	.255***
Education				
Primary	-.025	-.048	-.020	.004
Secondary general	.071*	.033	.095**	.125
Secondary vocational	.016	-.024	.048	.102
Tertiary	.191***	.117***	.181***	.132
Post-grad	.339***	.236***	.282***	.249
Area				
Urban	-.034**	-.012	-.004	.072*
Metropolitan	-.111***	-.090***	-.090***	.009
Health status				
good	-.183***	-.176***	-.146***	-.222***
medium	-.414***	-.374***	-.302***	-.405***
bad	-.739***	-.675***	-.583***	-.618***
very bad	-1.068***	-.991***	-.861***	-.958***
Trust in people				
Some distrust		.218***	.219***	.104*
Neither trust nor distrust		.311***	.271***	.190***
Some trust		.457***	.413***	.354***
Complete trust		.573***	.518***	.407***
Preferences for institutions				
Like democracy		.122***	.127***	.073*
Like market economy		.108***	.073***	.078**
Household owns the dwelling		.128***	.136***	.114**
Transfers are the main source of livelihood		-.241***	-.215***	-.093
Changes				
Change in trust in people 2006-1989: $\Delta_0 = \Delta$ increase in trust			.015**	.011
Change in self-perceived wealth decile ranking 1989-2006: $\Delta_0 = \Delta$ move upward			.126***	.108***
Job satisfaction				-.008
had a child (birth or adoption) in 2005				-.079
Done better than peers (high school mates)				.251***
Done better than peers (colleagues in 1989)				.238***
cut1:-cons	-1.538***	-1.139***	-1.067***	.098
cut2:-cons	-.616***	-.191***	-.071	1.122***
cut3:-cons	.062	.503***	.666***	1.899***
cut4:-cons	1.480***	1.946***	2.150***	3.462***
Obs.	26402	26367	21137	4134
e(ll)	-35882.31	-35318.97	-27725.33	-5138.389
χ^2 statistic	6395.479	7423.835	7337.196	1936.739
e(r2-p)	.082	.095	.117	.159

	EU (1)	SEE (2)	CIS low-income (3)	CIS middle-income (4)	Others (5)
Age	-.012**	-.003	-.002	-.015*	-.032***
Age squared	.0002***	.0001*	-7.62e-06	.0002**	.0003***
Gender	-.028	-.059*	-.012	.047	.212***
Expenditure					
2 quintile	.201***	.156**	.041	-.035	.094
3 quintile	.292***	.267***	.073	-.067	.138
4 quintile	.468***	.380***	.151**	.024	.124
5 quintile	.476***	.516***	.238***	.007	.396***
Employment status					
Waged worker	.159***	.066	.194***	.172**	.152*
Self-employed	.290***	.210***	.244***	.487***	.471***
Student	.371***	.287***	.266*	.190	-.237
Retiree	.177***	.178***	.314***	.108	.113
Homeworker	.193**	.128**	.159***	.377***	.264
Education					
Primary	-.136*	-.006	-.010	.063	-.125
Secondary general	.058	.139**	.103	.166	.136
Secondary vocational	-.048	.046	.025	.086	-.007
Tertiary	.168**	.163**	.078	.204	.138
Post-grad	.161	.568***	-.110	.144	.490**
Area					
Urban	-.162***	.091***	-.078**	.141***	.071
Metropolitan	-.080**	-.044	-.271***	-.0001	-.117
Health status					
good	-.237***	-.193***	.143*	-.188	-.165
medium	-.372***	-.291***	-.126*	-.358**	-.413***
bad	-.617***	-.612	-.437***	-.739***	-.604***
Trust in people					
Some distrust	.246**	.234**	.197***	.172***	.293***
Neither trust nor distrust	.272***	.275***	.245***	.322***	.353***
Some trust	.445	.353	.548***	.330**	.528***
Complete trust	.662	.585	.682	.494	.665
Preferences for institutions					
Like democracy	.111**	.140**	.155***	.043	.074
Like market economy	.162***	.014	.044	.158***	.193***
Household owns the dwelling	.082**	.134**	.180**	.061	.227**
Transfers are the main source of livelihood	-.156*	-.283	-.103	-.327**	-.268*
Changes					
Change in trust in people 2006-1989: $\delta_0 = \delta_i$ increase in trust	.024*	.039**	-.062**	-.006	.043*
Change in self-perceived wealth decile ranking 1989-2006: $\delta_0 = \delta_i$ move upward	.134***	.143	.124***	.151***	.108***
cut1--cons	-1.411**	-.644**	-1.056***	-1.711**	-1.549***
cut2--cons	-450***	.197	-.015	-.694**	-.451
cut3--cons	.264	.926***	.623***	.036	.414
cut4--cons	1.809***	2.201***	2.048**	1.538***	1.691***
Obs.	6559	4827	5132	2908	1711
e(lf)	-8452.895	-6707.561	-6961.072	-3827.76	-2269.224
χ^2 statistic	1744.603	1307.311	1228.884	741.778	533.072
e(r2-p)	.094	.089	.081	.088	.105

	EU (1)	SEE (2)	CIS low-income (3)	CIS middle-income (4)	Others (5)
31-40	-.061	.050	.006	-.066	.069
41-50	-.044	.124**	-.101*	-.025	-.122
51-60	.057	.149***	-.056	-.067	-.083
61-70	.324***	.282***	-.063	.101	-.161
λ .70	.496***	.400***	-.124	.182	.083
Gender	-.038	-.059*	-.016	.043	.215***
Expenditure					
2 quintile	.162***	.157**	.043	-.030	.102
3 quintile	.210***	.267***	.078*	-.066	.137
4 quintile	.336***	.378***	.154**	.029	.119
5 quintile	.299***	.516***	.244***	.012	.389***
Employment status					
Waged worker	.130***	.065	.197***	.171**	.124
Self-employed	.219***	.208***	.245***	.479***	.460***
Student	-.247***	.291***	.279*	.211	-.109
Retiree	.153***	.185***	.282***	.091	.179*
Homeworker	.165*	.128**	.160***	.373***	.226
Education					
Primary	-.146*	-.010	-.005	.060	-.131
Secondary general	.003	.132*	.111	.170	.122
Secondary vocational	-.089	.039	.033	.085	-.024
Tertiary	.066	.160**	.085	.202	.137
Post-grad	.077	.568***	-.100	.144	.472**
Area					
Urban	-.165***	.090**	-.079**	.140***	.074
Metropolitan	-.098**	-.043	-.276***	.0001	-.113
Health status					
good	-.223***	-.194***	.144*	-.196	-.170*
medium	-.349***	-.290***	-.125*	-.365**	-.421***
bad	-.578***	-.608***	-.436***	-.746***	-.611***
very bad	-.956***	-.802***	-.789***	-.1.011***	-.649***
Trust in people					
Some distrust	.247***	.234**	.196***	.172***	.294***
Neither trust nor distrust	.272**	.275***	.245***	.324***	.356***
Some trust	.449***	.353***	.550***	.332***	.530***
Complete trust	.667***	.587***	.685***	.492***	.664***
Preferences for institutions					
Like democracy	.106***	.142***	.155***	.044	.076
Like market economy	.148***	.012	.046	.158***	.189***
Household owns the dwelling	.053	.137***	.182***	.060	.240**
Transfers are the main source of livelihood	-.098	-.282***	-.100	-.328**	-.260
Changes					
Change in trust in people 2006-1989; $\lambda_0 = \lambda$; increase in trust	.025*	.038***	-.063***	-.006	.042
Change in self-perceived wealth decile ranking 1989-2006; $\lambda_0 = \lambda$; move upward	.126***	.143***	.124***	.151***	.109***
cut1:-cons	-1.159***	-.629***	-.984***	-1.469***	-.900***
cut2:-cons	-.190	.212*	.058	-.451**	.198
cut3:-cons	.530***	.941***	.696***	.278	1.064***
cut4:-cons	2.090***	2.215***	2.122***	1.782***	2.342***
Obs.	6559	4827	5132	2908	1711
e(l)	-8400.441	-6708.168	-6959.138	-3826.475	-2268.432
χ^2 statistic	1849.509	1306.096	1232.753	744.349	534.655
e(r- P)	.099	.089	.081	.089	.105

Table 3: Ordered probit results, quadratic polynomial in age specification, by gender

	Females (1)	Males (2)
Age	-.012***	-.021***
Age squared	.0002***	.0002***
Expenditure		
2 quintile	.180***	.139***
3 quintile	.220***	.268***
4 quintile	.377***	.376***
5 quintile	.456***	.530***
Employment status		
Waged worker	.039	.147***
Self-employed	.145***	.267***
Student	.188**	.304***
Retiree	.121***	.178***
Homeworker	.125***	.311***
Education		
Primary	.042	-.132*
Secondary general	.160***	-.011
Secondary vocational	.117**	-.057
Tertiary	.221***	.122*
Post-grad	.290**	.251*
Area		
Urban	-.028	.028
Metropolitan	-.116***	-.056
Health status		
good	-.196***	-.092**
medium	-.328***	-.284***
bad	-.636***	-.525***
very bad	-.934***	-.767***
Trust in people		
Some distrust	.252***	.171***
Neither trust nor distrust	.302***	.223***
Some trust	.446***	.365***
Complete trust	.540***	.484***
Preferences for institutions		
Like democracy	.124***	.138***
Like market economy	.100***	.037
Household owns the dwelling	.157***	.107***
Transfers are the main source of livelihood	-.199***	-.223***
Changes		
Change in trust in people 2006-1989: $i_0 = i_t$ increase in trust	.017*	.012
Change in self-perceived wealth decile ranking 1989-2006: $i_0 = i_t$ move upward	.129***	.122***
cut1:-cons	-1.186***	-1.542***
cut2:-cons	-.191	-.537***
cut3:-cons	.556***	.189
cut4:-cons	2.051***	1.669***
Obs.	12505	8632
e(l1)	-16379.63	-11295.84
χ^2 statistic	4334.295	3090.176
e(r2-p)	.117	.12

Table 4: Ordered probit results, age dummies specification, by gender

	Females (1)	Males (2)
31-40	-.037	-.063
41-50	-.046	-.066
51-60	.019	-.049
61-70	.135***	.086
λ 70	.235***	.207***
Expenditure		
2 quintile	.179***	.140***
3 quintile	.218***	.269***
4 quintile	.374***	.374***
5 quintile	.454***	.529***
Employment status		
Waged worker	.043	.143***
Self-employed	.147***	.264***
Student	.193**	.336***
Retiree	.104***	.177***
Homeworker	.126***	.312***
Education		
Primary	.042	-.145**
Secondary general	.162***	-.026
Secondary vocational	.119**	-.073
Tertiary	.221***	.105
Post-grad	.293**	.237*
Area		
Urban	-.027	.028
Metropolitan	-.116***	-.055
Health status		
good	-.195***	-.094**
medium	-.326***	-.286***
bad	-.633***	-.524***
very bad	-.928***	-.766***
Trust in people		
Some distrust	.253***	.171***
Neither trust nor distrust	.304***	.223***
Some trust	.448***	.367***
Complete trust	.540***	.484***
Preferences for institutions		
Like democracy	.124***	.138***
Like market economy	.100***	.035
Household owns the dwelling	.158***	.108***
Transfers are the main source of livelihood	-.200***	-.226***
Changes		
Change in trust in people 2006-1989: $\lambda_0 = \lambda$ increase in trust	.017*	.012
Change in self-perceived wealth decile ranking 1989-2006: $\lambda_0 = \lambda$ move upward	.129***	.123***
cut1:-cons	-1.008***	-1.192***
cut2:-cons	-.013	-.189*
cut3:-cons	.735***	.538***
cut4:-cons	2.230***	2.017***
Obs.	12505	8632
e(l1)	-16378.36	-11299.33
χ^2 statistic	4336.839	3083.195
e(r2-p)	.117	.12