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Deliverable No.18 "Subjective well-being, competitive pressure and income distribution".

Part I. Subjective well-being and its correlates in Hungary, Romania and Slovenia

Part II. Income distribution, mobility and well-being in Hungary, Romania and Slovenia

Part III. Income comparisons, aversion to inequality and mobility. An East-West comparative approach.

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I. INTRODUCTION

COMPPRESS research project is expected to contribute to a better understanding of the dynamics of competitive pressure both on the enterprise level and the household one in four Central and East European countries: Bulgaria, Hungary, Romania and Slovenia.

The work package 4 (WP4) is focused at the household level. In transition, when households have to adjust to a new and market situation, competitive pressure contains, at least, two elements: transition pressure and market pressure (more complex as the country join[6] the European Union).

With the COMPPRESS research project, the analysis of competitive pressure at the household level has involved two approaches: *Objective well-being* based on normative or descriptive indicators that have been used to analyze the quality of life of specific groups or subgroups and *subjective well-being* which is based on satisfaction indicators that are used to understand how individuals assess their quality of life.

Based on indicators of objective well-being: Deliverable D13[7] (December 2004) provided an analysis of the main trends of the economically active and inactive populations, of incomes, and of income and social policies during the period 1989-2002, with focus put on the period after the first years of transition. Deliverable D14 (December 2004) described the changes in socioeconomic structure of households and in household income sources. In addition, D14 delivered measures of income inequality and of poverty risk. Deliverable 15 (November 2004) completed the picture by analyzing the impact on economic structure and labour markets of the increased competitive pressure, from a formal-informal perspective.

This paper - Deliverable 18 – is an analysis of the subjective well-being based on satisfaction indicators. An extensive literature review of the subject is included in Deliverable 6 (December 2003). This is an empirical paper based on analysis of available survey data including subjective attitudinal questions related to subjective well-being, inequality, mobility, and demand for redistribution policies. The main research question of this paper refers to the main correlates of the subjective economic well-being, with a particular accent on the relation between income distribution, income mobility and well-being.

The organization of the report is as follows. Section 1 presents the analysis of subjective well-being in three Eastern countries of the project (Hungary, Romania and Slovenia). Section 2 analyzes the relation between income distribution, income mobility, competitive pressure and subjective well-being in the aforementioned countries. Section 3 tries to generalize the findings by proposing an exhaustive comparative approach of attitudes to income inequality, depending on the perception of income mobility. As sections represent distinct studies, the main conclusions of each study are summarized in the end of each section.

[6] Slovenia and Hungary became members of the European Union in 2004. Bulgaria and Romania are scheduled to join the EU in 2007.

[7] We showed that, although in different extents, in all four COMPRESS countries restructuring of the economy resulted in large increase in unemployment and large increase in the number of pensioners; the real income after seriously dropped it has improved as the economy recovered. We also described and compared the responses of the four states to the transition shock; to what extent and in what ways they ensured protection of the population and of the most vulnerable (children and elderly).

I. SUBJECTIVE WELL-BEING AND ITS CORRELATES

The analysis is focused on the determinants of satisfaction variables, used as proxies for subjective well-being. This report is rather eclectic and comparisons between countries are 'weak' (indicative) primarily due to the data constraints. The study is based on indicators that vary from a country to another according to the available data.

Obviously, analysis of the subjective economic well-being depends on the 'richness' of the survey data. For instance, the subjective perception of one's income very much depends on relative income, both relative to one's reference group or relative to one's past experience (McBride, 2001). Furthermore, health, education, employment, wealth and other socio-economic characteristics of the household are important, as well as attitudinal variables. Needless to say, surveys which contain a long list of such 'desirable' data are rare, particularly in Central and Eastern European countries. Among those that stand out is the Russian longitudinal monitoring survey, and the subjective economic well-being using this survey has been extensively analysed by Ravallion and Lokshin (2002). Compared to their analysis, ours' is more modest, as the available survey data pose the real constraints.

I.1 Data and method

Hungary

For measuring subjective variables is used a nationally representative supplementary survey attached to the 2002 (asked in March 2003) yearly interview of the *Hungarian Household Budget Surveys* (HBS[8]). Adult members of households (age of respondants ≥ 18 years) taking part in HBS between 2000 and 2002 (3540 members of 1903 households) were asked in this supplementary survey.

Two satisfaction questions are used, namely: 1. 'To what extent are you satisfied or dissatisfied with the material situation of your household: (1) very dissatisfied, (2) fairly dissatisfied, (3) neither satisfied or dissatisfied, (4) fairly satisfied, (5) very satisfied?' and 2. 'All things considered to what extent are you satisfied or dissatisfied with your life in general: (1) very dissatisfied, (2) fairly dissatisfied, (3) neither satisfied or dissatisfied, (4) fairly satisfied, (5) very satisfied?'.

The subjective questions and the raw distributions of the answers are presented in Annex A and B.

Romania

This analysis is based on the data provided by the *Public Opinion Barometer* (POB) of the Open Society Foundation Bucharest, wave conducted[9] in October 2003 on a representative stratified sample (of 2,035 persons 18 years or above). The sample is representative both at the national and the regional levels. POB FSD 2003 has included a set of questions commanded by the RCEM with the COMPPRESS research project.

[8] The HB surveys are undertaken by the Hungarian Central Statistical Office (HCSO).
[9] Information is available at http://www.osf.ro

Thus, the survey includes a range of satisfaction variables[10]. General life satisfaction is measured based on the question 'As a whole, how satisfied are you with your life in general?' (similar to *GSOEP, RLMS, World Values Survey* or *Eurobarometer Surveys*). Other, more precise questions are also asked about satisfaction with income, with the financial situation of the household, with job, with health and with housing, which are considered components of the general concept[11] of well-being. The survey includes also questions on expectations and subjective mobility, demand for redistribution as well as perceptions of the competitive pressure and its consequences.

Socio-demographic and budget related data were collected both at the individual and household levels. Descriptive statistics are presented in the Annex A and C.

Slovenia

The analysis is based on the Household Expenditure Survey, which has being carried out annually by the Statistical Office of the Republic of Slovenia. Up to 1997, the Statistical Office was carrying out annual Household Expenditure Surveys and also Household Expenditure Surveys using larger samples in five-year intervals, the last such survey being carried out in 1993. In 1997 some methodological changes were introduced and only annual surveys are carried out; the Statistical Office then merges three annual surveys in order to obtain a larger sample.

This analysis of income satisfaction is based on the following question from the 1988 and 1993 Household Expenditure Survey: 'In relation to your costs of living, your family income is: (1) very insufficient, (2) insufficient, (3) sufficient, (4) amply sufficient?' In the surveys, this question was – as a rule – posed to the head of household.

With the implementation of methodological changes in 1997 the question was rephrased and posed (to head of household) as: 'Considering your monthly disposable income, is your household able to make ends meet: (1) with great difficulty, (2) with difficulty, (3) with some difficulty, (4) without difficulty, (5) with ease, (6) with great ease?' Due to small number of observations in the sixth rank ('ends meet with great ease') ranks 5 and 6 were merged under the common name 'ends meet with ease'. The data sample for the years 1997–1999 is therefore analysed using this modification.

Information on the values of some selected variables from the sample are included in Annex D.

I.2 The patterns of subjective well-being in three Transition countries

In all Central and Eastern European countries, in the new transition pressure situation of the early '90s, the decline in economic output was accompanied by decline of the real incomes, growing inequality of income, expenditure and assets, and the development of poverty and unemployment. As the market has developed and as the country comes closer to the EU accession, the market pressure overcomes the transition pressure. The economy is recovering

[10] Satisfaction with the financial situation of the household has a five-point answering scale: 1 – not at all satisfied, 2 – rather dissatisfied, 3 – neither dissatisfied not satisfied, 4 – rather satisfied and 5 – very satisfied. All other satisfaction variables have a four-point answering scale, where: 1 – not at all satisfied, 2 – rather dissatisfied, 3 – rather satisfied and 4 – very satisfied.
[11] See Deliverable 6, WP4, COMPPRESS, 2003.

and, correlated, the real incomes and employment begin to have a growing trend. Still poverty, growing inequality, underemployment and informal employment (particularly in agriculture) remain major issues to a much larger extent in Romania and Bulgaria compared to Hungary and particularly Slovenia.

Due to low inequality and moderate income levels, socialist countries enjoyed relatively high levels of economic well-being, but low levels of subjective well-being. In the transition period rising inequality and falling incomes have led to a drastic absolute decline in economic well-being in the ex-socialist countries. (Klasen and Gruen, 2001). Thus, at the subjective level, transition period was characterized by a "huge satisfaction loss". The harsher the transition, the larger the decline in population satisfaction. Positive trend of satisfaction and optimism curves started to be recorded as the country economy began to recover.

For instance in Romania, a very little recovery has been registered only after 2000 (Abraham and Gânju, 2000 and Comsa, 2003). The satisfaction and optimism curves have been almost parallel with the real GDP curve. (Deliverable 6)

Table 1 Satisfaction toward household standard of living and optimism regarding life in the next year, Romania 1991-2003, (% population 18 years or over)

Indicator	Sep. 1991	July 1993	Oct. 1994	Dec. 1995	Oct. 1996	Dec. 1997	June 1998	Oct. 1999	Nov. 2000	Oct. 2003
"Satisfied" and "very satisfied" with their household standard of living	73	24	26	40	40	42	36	16	20	21*
Optimist, next year they will live "better"	40	28	31	31	40	35	24	14	25	29

Source: Abraham and Gânju, 2000: 77. CURS SA databases 1991-2000 and * satisfaction with household financial situation, POB OSF 2003. See also Table A2 and C4, Annex A and C.

As we have shown in our Deliverable 6, a large body of literature focuses on the subjective well-being study. Nonetheless, both data and analysis are rather scarce (limited to basic descriptive) for the COMPPRESS countries. For this report we test the main correlates of the subjective well-being meet in the international literature based on the data available in each country.

The most stable "correlates of happiness"[12] (Clark and Oswald, 1994, Oswald, 1997, Frey and Stutzer, 2000) are, *ceteris paribu*s, the age U shaped relationship with a minimum around 40 years, where age captures cohort effects in the same time, the positive influence of marriage (as compared to divorce or widowhood), of health, of income and of not being unemployed. Education, independent of income, has a positive effect on happiness.

Cross-sectional micro data of subjective well-being often show a positive correlation with individual or household incomes. The results of large international literature of 'happiness' have suggested, however, that incomes do not have much power to explain perceived well-being, (Easterlin, 1995, 2002, 2004, 2005; Diener and Suh, 1997, 2000; Diener and Biswas-Diener, 2002; Veenhoven 1991, 1996). Economic growth did not bring higher average 'happiness' as people's happiness does not depend on money and absolute level of consumption alone (van Praag, 1993, 1999; Oswald, 1997; Frey and Stutzer, 2002, 2005). People quickly adjust to higher living standards and find it difficult to adjust downwards. Extra money does not necessarily make people better off either, because people tend to compare their living standard with others. Income differences are much easier perceivable by people than mobility or wealth differences. Sometimes a person who is upwardly mobile in

[12] See also Deliverable 6 (2003).

income cannot perceive this fact, because his income does not change in absolute term, just relatively. That is why, it is income or equivalent income what is taken by most of the people as a proxy for welfare, and income inequality is taken as synonymous to welfare inequality (Ferrer-I-Carbonell, 2003).

Examining the determinants of subjective economic well-being in Russia, including its relationship to conventional objective indicators, Ravallion and Lokshin use survey responses in which respondents rate their level of well-being from poor to rich on a nine-point ladder. They find that Russian adults with higher family income are less likely to place themselves on the lowest position of the nine-point ladder and more likely to put themselves on the upper position comparing with their current income. Current household income can only partially explain how Russian adults perceive their economic well-being. Past factual and subjective incomes and household consumption, current unemployment, risk of unemployment, health status and education have also to be taken into account. But relative income – relative to some reference group – really drives self-rated subjective well-being, rather than absolute income. (Ravallion and Lokshin, 1999, 2001).

The same discrepancy between "objective" and "subjective" poverty estimates was empirically found also in Romania. In this case a scale of 10 points (1-poor and 10-rich) for ranking individuals according to their self-assessment "compared to the others" has been used. "Poor" are considered those who self-identify on the first two positions.

Table 2. Compared to the others, where do you place yourself on the following scale?

Year	Poor									Rich
1998	6.8	10.6	17.6	19.6	31.4	9.5	2.2	0.7	0.4	0.1
1999	6.9	9.8	16.9	18.1	33.2	8.5	3.8	1.0	0.1	0.2
2000	7.7	8.9	15.7	17.3	37.1	8.1	2.9	1.3	0.3	0.6
2001	12.8	8.1	14.1	17.0	32.7	8.8	4.8	1.4	0.2	0.05
Oct. 2003	7.2	13.1	24.0	21.0	21.7	7.9	3.5	1.4	0.2	0.1

Data: Romanian POB OSF, 1998-2003.

Self-identification as poor depends on a complex of factors such as material, human, symbolic or relational capital of the individual, but also on the development level of the community he/she lives. A series of community studies showed that whereas in very poor villages with low migration the self-identification as poor is much lower than the "objective" poverty rate, in more developed villages with high migration abroad the subjective poverty exceeds the "objective" poverty. Thus, more developed the community where individual lives and the higher the direct or intermediate interaction with Western models, the higher the level of expectations thus the higher the proportion of those self-identified as poor. (UNDP, 1999 and Sandu and Stănculescu, 1999)

The following sections present the results of our empirical studies by country (in alphabetical order).

Satisfaction in Hungary 2002

Two satisfaction variables are used as proxies for the subjective well-being of the Hungarians in 2002, namely satisfaction with household material satisfaction and general life satisfaction. The raw distributions of the two variables are presented in Annex A, Tables A1 and A2.

The analysis uses three ordered logit models for each variable (See Annex B, Tables B8 and B9) for estimating the main relationships of subjective well-being in competitive pressure situation.

As independent variables we expect that both income and labour market status will have significant impact on satisfaction. Similarly health, housing conditions, family structure, family events, social life, and neighbourhood characteristics are expected to be strongly correlated with satisfaction. Nonetheless as we focus on the impact of competitive pressure we limit the predictors included in our models to those relevant in this respect.

Thus, the **'objective' explanatory variables** include income, labour market participation, age, education, and finally, a group of certain assets as proxy for measuring living conditions and wealth of households (car and holiday house). Three alternative income measures are tested, namely: (1) the log of household income adjusted to household size, (2) income quintiles/deciles, (3) not equidistant income groups, where the size of group depends on the income level.

Income is positively correlated with satisfaction toward the material situation of household. The coefficients proved to be significant for all three alternative income variables. Comparing different values of pseudo R^2 we can reach the strongest relationship in the third case, using diminishing income group sizes: quintiles first, deciles after, and two twentieths at the top (only this variant is presented in the Table B8 and B9, Annex B). We can also see here that increasing income the satisfaction of the highest income groups are relatively steeply increasing, which seems to contradict the theory of decreasing marginal utility, and the convex-concave shape of the value function of income. A partial explanation for this phenomenon may be that the highest income groups, that is the richest families are missing from our sample, so the end of the typical value function of income is cut down here.

With respect to competitive pressure the most important block of variables is the labour market participation, the group of activity variables. After controlling for income the *unemployed and quasi-unemployed* are significantly less satisfied than workers. Thus, labour market status is the major element of dissatisfaction. People 'living on the outskirts of activity' and on the border of activity and inactivity – *unemployed, disability pensioners, casual workers, people living on subsidies; called together as marginal activity groups in the Tables* – report much lower satisfaction. Their proportion is about 13 per cent in the whole population. Furthermore, not only these people, but even their family members are more dissatisfied. The proportion of people in these marginal activity groups together with their family members is already 31 per cent of the whole population. The sign of their coefficients is negative in all cases their labour market status contributes to dissatisfaction over income.

The specific category of *disability pensioners* deserves particular attention because this was a typical way of escaping and withdrawing from the labour market during economic transition as an alternative to unemployment. According to the previous Hungarian well-being studies *health* is also a major component of individual's subjective well-being. Bad health is negatively correlated with overall life satisfaction controlling for age and other personal characteristics, because the occurrence of disability or illness is decreasing people's activity. The impact of health on life satisfaction is large: the coefficient of bad health is usually greater than that on unemployment or income. Knowing this we have to put on the question, what is the stronger effect in case of disability pensioners: inactivity or bad health. After analysis of a special variable of permanently sick persons in the family, we can find this health variable insignificant in the material satisfaction model, but this variable really substitutes the variable of disability pensioners in the life satisfaction model.

We could not find significant relationship between *entrepreneurship* and satisfaction. Previous Hungarian researches (Lelkes, 2002, 2004; Sági, 1999) have showed that entrepreneurship has become more positively associated with life satisfaction over time, even controlling for income, education, and so on. According to their results entrepreneurs are the only labour market group whose position has improved in the 1990s, and they were called the absolute winners of the transition.

The increase in number of *students in the population aged over 18* is largely due to the intensive expansion of higher education. In case of life satisfaction we find a new variable in the model, the group of students, whose coefficient has positive sign. Education for those aged over 18 seems to be a source of pleasure, this group is quite satisfied, but in case of material satisfaction their effect is not significant.

Age has the very well-known U-shaped quality, where there is first a decrease in satisfaction and than an increase at the end. In case of age variable we also prefer using discrete time variables instead of quadratic continuous ones. The category of young is quite broad, middle-aged are between 40 and 54, and the category of older people is over 54. The *middle-aged* are more dissatisfied than the average. In this age category people are still active and taking part in competition, but got socialized in another political and economic situation. Several research results show that this middle-aged group gives a greater weight to present income than do either young or the old. They are more concerned about unemployment, and after living in a long shortage period they are more likely to have immediate consumption and expenditure needs motivated by the availability of imported consumer goods, what can also be a source of discontent. The opposite of this that the people younger than 40 have no any negative labour market experiences of the ancient regime.

Education, independent of income, has a positive effect on satisfaction. In our model the group of highly educated people has positive and significant effect on satisfaction. Those with higher education have the highest level of satisfaction, even after controlling for labour market status and household income. This suggests that this relative satisfaction of the well educated can improve their earnings potential. Changing explanatory variables of material satisfaction we can get the same result if we use two categories of people of educated only in primary and vocational schools instead of group educated highly (in this case their coefficient is of course negative). But in case of life satisfaction we can get the best result if we use the tertiary educated group in the model.

Previous research results showed that variables for level of *wealth* have strong, positive and significant effect on satisfaction (Graham and Pettinato, 2002). When wealth variables are included in the models, the coefficients for high education level is usually significant and positive, but has much weaker effect than the effects of wealth, or may be insignificant. Wealth and education levels are highly correlated, when wealth is excluded, education levels have positive and significant effects on satisfaction. As a proxy for measuring level of wealth we use passenger car (which is owned by the 38% of the population in the sample) and one real estate variable (holiday house, 8%). Passenger car increases satisfaction, but surprisingly, variable of holiday house property has negative coefficient in modeling material satisfaction. We think that this result is mainly produced by upward mobile respondents.

Besides the 'objective' explanatory variables, the models include few **'subjective' correlates of satisfaction**.

Our first subjective variable contains the 5 possible answers to the question: 'How has the financial situation of your family changed during the last three years?' (see Table B7 in Annex B). We call it *subjective mobility*. Although subjective mobility is much closer to relative than to absolute mobility, still there is a quite considerable difference between the

subjective and the objective relative mobility, namely the majority of respondents underestimate the real size of changes in their financial situation. As we have demonstrated in a previous study (Molnar and Kapitany, 2005), the perceived value of changes in income position - called here as subjective mobility – have much more effect both on material and on life satisfaction than current value of changes in financial situation. Thus*, the objective trends in mobility are also very important, but how people perceive their past mobility and their prospect of upward mobility in the future is what really determines subjective well-being.*

In the regression models presented here (Tables B8 and B9, Annex B) considering group of respondents who felt that their financial situation – slightly, or considerably – declined as a reference category, both the unchanged and the slightly improving financial situation category got into the model with positive coefficient. According to our assumption, the coefficient of improving financial situation category is bigger than the category of unchanged financial situation. Number of respondents who reported considerably improving financial situation is so small that we could not use this category in our model, we let them out.

Subjective mobility itself contains numerous categories what were described by objective variables in our first model. Using subjective mobility variable in this model pushes out some variables used earlier and makes them insignificant. These formerly used variables belong to the group of variables which describe current income positions in details that is why we apply log equivalent income here.

Besides subjective mobility several other subjective variables have impact on satisfaction. We refer to the perceived dynamic of income inequality and to the attitudes towards redistribution. However, in the case of these variables the causal relation is no longer so clear so that we consider them "correlates" and not "determinants" of satisfaction.

Majority of respondents think that *inequality of income and wealth considerably increased in Hungary from the middle of the 1990s* (see Table A9 in Annex A). According to our previous research after the stabilisation shock in 1995 the inequality of Hungarian households was stabilised rather than increased, the growth of income inequality slowed (Kapitány and Molnár, 2004). However, the slight growth of income differences and the stabilised relative positions of the most affluent can be coupled with considerable and further growth of wealth differences. We can see that people who believe that inequality of income and wealth considerable increased in the investigated period are more dissatisfied than the rest of the population.

Similarly, respondents who essentially agree that government should restrict the income of the rich are more dissatisfied. But respondents who 'more disagree than agree' this opinion have higher satisfaction than the average population. Group of people who 'essentially disagree' that opinion is very small.

Variables based on questions concerning redistribution of income for poor are insignificant. However, expectations about future prospects for mobility strongly affect both life and material satisfaction. In case of these question the large-sized non-response problem – not independent of satisfaction – creates difficulties. We have postponed this problem to the further research.

In the next step of modeling (the third column of Tables B8 and B9, Annex B) we consider not only the subjective values of changes in relative income and wealth position, but also the *subjective value of wealth position itself*. In our supplementary interview we included an Economic Ladder Question (see Tables A3 and A4, Annex A) for both 2000 and 2002. The results show that as people rank their position on the economic scale, the majority of the sample placing themselves in the middle categories, even if they are slightly above or below

them according to their objective value of wealth. Using this subjective self-ranking variable in our third model, we get better estimation parameters and the explanatory power of our model is considerably increasing.

Difference of subjective wealth positions in 2002 and 2000 and our subjective mobility variables can be considered as two different self-evaluations of people's mobility between 2000 and 2002. We can see that these two variables are quite different, their correlation coefficient is only 0.3. The differences of wealth rankings – contrary the subjective mobility – are symmetric, the number of people who think that their financial situation declined and number of those who think that their situation improved are basically the same. Furthermore, according to the responds of 63 per cent of people their subjective relative position has not changed in the investigated period, while we see in the subjective mobility question that proportion of people reported unchanged financial situation here is twenty per cent less.

The above mentioned difference between the two subjective self-rankings is originated from the fact that many people among the poor think that their position did not change and they remained on the same rung of the wealth ladder. However, it means that their income was considerably under the acceptable subsistence level in the investigated period, and this leads to the declining perceived financial situation.

After these findings it is more understandable why the two categories of subjective mobility are still significant in our model, besides variables of subjective wealth ranking in 2000. There is nobody in the ninth category of wealth ranking and only some people are in the eighth one so, we use their sum as a reference category. We can see that the differences of coefficients between rungs of the ladder are quite big. Similarly, the size of the difference between the wealth rankings of the two years results quite big differences in the coefficients. All of these expressly indicate that satisfaction is determined – to a much grater extent – by the perceived wealth positions, rather than by the current relative one.

Activity categories used in our previous model here are significant only in a combined form. We use the complementing middle-aged category here instead of categories of young and old, because young became insignificant.

In conclusion, this section focused on the determinants of subjective well-being in Hungary connected with the competitive pressure components, namely: unemployment, poverty, inequality, uncertainty, perceived mobility, and perceived income and wealth. By analysing the link between satisfaction and the competitive pressure components we highlighted a series of information relevant for policy making.

- Labour market status is the major element of dissatisfaction, the unemployed and quasi-unemployed are significantly less satisfied than workers, controlling for income. People living on the border of activity and inactivity – unemployed, disability pensioners, casual workers, people living on subsidies – report much lower satisfaction.
- The middle-aged people are more dissatisfied than the average. They are more concerned about unemployment, and after living in a long shortage period they are more likely to have immediate consumption and expenditure needs.
- Education has a positive effect on satisfaction, even after controlling for labour market status and household income.
- People that perceive that income and wealth inequality considerable increased tend to be are more dissatisfied than the rest of the population. Similarly, respondents who essentially agree that government should restrict the income of the rich are more dissatisfied.

Satisfaction in Romania 2003

Throughout the period 1991-1999, few "individual optimism cycles" were recorded, the variation of the optimism curve being consistent with both electoral and economic cycles. Thus, "waves of hope" are related to pre/post electoral enthusiasm (as were 1992, 1996) and/or with years when the real wage as well as the food consumption (measured in average consumption of calories per day per inhabitant) improved (as was 1994). The curve of general life satisfaction follows the same pattern but is more sensitive to economic cycles than to the electoral ones. Furthermore, satisfaction with life is richer in determinants[13] indicating the individual or household resources. (Sandu, 1999: 33-53)

Optimism as well as satisfaction with "life", "health", "durable goods" and "housing conditions" has the individual resources of education, income and social relations as significant determinants. Expectedly, the higher the individual resources, the more optimist and satisfied he/she is. (Sandu, 2003)

Economic subjective well-being (subjective assessment of the household economic standard) does not differ significantly on gender but varies significantly according age, education, and household income/expenditure quintile. The younger have more positive assessments and more optimistic expectations, particularly when succeeded to become economically independent and set up their own households. The higher the achieved education level, the more positive the assessment, the more optimistic the expectations, and the higher the satisfaction towards the way they live. The better the household economic situation objectively determined, the better the subjective assessment and the higher the respondent's satisfaction. Thus, within Romania, richer people are happier than the poor ones. (Stănculescu[14] and Berevoescu, 2003)

Unlike previous studies (as those shortly presented above) the empirical analysis presented here is focused on the interactions between subjective well-being and variables relevant for competitive pressure.

In order to increase comparability with the Hungarian study we use as proxy for subjective well-being two variables, namely satisfaction with the household financial situation and the general life satisfaction (Tables A1 and A2, Annex A). Also, the explanatory variables and the regression models will be as comparable as possible (given the available data) with those included in the previous section 2.1.

Among determinants, we concentrate on income and labour market status. Income refers to the current household income – (natural logarithm or deciles[15]) of equalized[16] monetary

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[13] The author tested the same regression model both for optimism and satisfaction with present way of living. Predictors: age, sex (young, old), household durable goods index, household average income per person in the last month, "useful" social relations, satisfaction towards quality of human relations, index of satisfaction with the community (transport, medical services, town/village cleaning, leisure opportunities), satisfaction with personal finances, satisfaction with job, satisfaction with personal health, trust in government, area of residence, county level of development, trust in institutions of public order (Police, Army, Justice). The model for optimism included in addition the following variables: risk taking/risk aversion attitude, unemployment represents the main concern, satisfaction with present way of living, and evaluation of present situation compared to previous year. Data: For 1991-1993, surveys of the Research Office of USIA in Romania and for 1994-1999, POB OSF data. (Sandu, 1999: 45-47, 181, 189)

[14] Research project *Households, Work and Flexibility* (HWF) coordinated by Claire Wallace (Institute for Advanced Studies, Vienna) and funded by the European Commission under the Fifth Framework Programme contract no. HPSE-1999-00030. Within the HWF project, a survey was conducted in the spring of 2001 using face-to-face interviews or telephone interviews (nationally representative samples). Eight countries (Western EU countries and a range of Eastern European candidate countries, including Romania) were chosen so that to be illustrative of different policy approaches to work flexibilisation and the work-family balance. For more information on the HWF questionnaire and survey and for detailed descriptions of the HWF survey in respective countries see Wallace (2003).

[15] Households are ranked from the lowest to the highest, according to household equivalent monetary income. The first decile contains the lowest 10% of all households; the tenth decile contains the highest 10% of all households.

household income. In Romania, self-production (consumption) represents a consistent part of household budgets, particularly in the rural areas. Consequently, the general research practice is to determine a total income including the counter value of the products and services produced in the households. Here, nonetheless, we take into consideration only the monetary income of households for two reasons: 1. self-production is "weakly"[17] measured in the BOP OSF and 2. at least in Romania, with respect to subjective well-being the monetary income is more relevant than total income as previous studies demonstrated (Stanculescu, 1998).

In first step we test for Romania the main "correlates of happiness" meet in the literature (see Deliverable 6, 2003) based on the POB OSF wave 2003. Thus, in Romania, the most stable[18] relations with life satisfaction (used as proxy for "happiness") are, *ceteris paribu*s, the age negative effect, the positive influence of marriage (as compared to divorce or widowhood), of health, of income and of not being unemployed. This multiple regression model explains 27% of the variation in individual welfare (which is higher than the typical order of magnitude of the R square of these regressions presented in the literature).

Table 3. Multiple regression model of "correlates of happiness"

		Standardized coefficient Beta	Sig.	Collinearity Statistics	
Model				Tolerance	VIF
	(Constant)		.000		
	Age in years	-.096	.000	.764	1.308
	Married (dummy, 1=married)	.078	.000	.972	1.029
	Unemployed (dummy, 1=unemployed)	-.051	.018	.941	1.063
	Satisfaction with health	.326	.000	.780	1.282
	Ln(equalized monetary monthly household income)	.326	.000	.798	1.253
	Residency (1=urban, 0=rural)	-.171	.000	.834	1.200
a	Dependent Variable: XSLIFE Life satisfaction				

Data: POB OSF 2003. N=1661 cases. R Square 27%. Durbin-Watson 1.889.

Notes: *Unemployed* are persons who declared searching for job even if they do occasional work in the informal sector and regardless if they are officially registered or not. *Satisfaction with health* (Table C2, Annex C). *Income* – In-kind income from self-production is not included. *Residency* - when is excluded from the model, the R square decreases to 0.25 and Durbin-Watson to 1.84.

Education exerts a positive impact on life satisfaction, but this relation is mediated by the income effect.

The negative effect of age over life satisfaction distinguishes Romania both from Hungary and Slovenia as well as from most countries. Most empirical studies document a U shaped relationship with a minimum around 40 years, where age captures cohort effects in the same time. This U shaped relationship is not confirmed for the Romanian case. (Figure 1) This is mainly the effect of low pensions, which push elderly to work particularly in agriculture, and of poor access to health care services and medicines (see below). The majority of population 60 years or over "cannot afford the medicines" they need. This proved to be a powerful predictor (negative sign) when included in the multiple regression model of life satisfaction.

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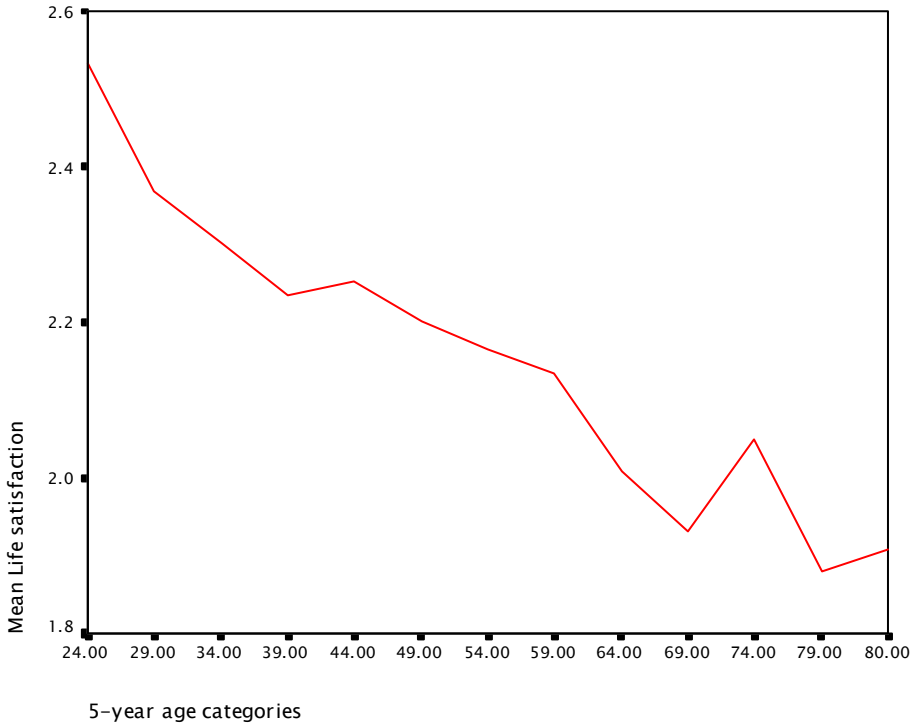
[16] In order to allow comparisons of households of different size and composition, household income was equivalized using the *OECD equivalence scale*: The first adult in the household was assigned a weight of 1, all other adults 0.7 and each child (below age 15) was assigned weight 0.5. Household income divided by the number of equivalent adults is *household equivalent income*.

[17] Income data refer strictly to one month (September 2003) whereas self-production is strongly affected by seasonality.

[18] Consistent with Clark and Oswald, 1994, Oswald, 1997, Frey and Stutzer, 2000 see Deliverable 6 (2003).

Figure 1 Life satisfaction by 5-year age categories, Romania 2003



Source: Romanian *Public Opinion Barometer* 2003 (Open Society Foundation Bucharest).

Notes: Missing cases are excluded from the graph. Number of valid cases 1,898. *Life satisfaction*: As a whole, how satisfied are you with your life in general? 1- not at all satisfied, 2 – rather dissatisfied, 3 – rather satisfied, 4 – very satisfied.

In concordance with other studies based on micro data (see sections on Hungary and Slovenia and e.g. Blanchflower and Oswald, 2003), own income has a positive and significant influence on individual well-being. However, by using own income (instead of household income) in the regression model above, the R square diminishes (to 22%) and income explanatory power decreases sharply; happier than people with high income are young economically dependents from households with higher income. Thus, in Romania, compared to individual income, the household income is more significant for individual life satisfaction.

In the second step, the analysis turns to the relation between satisfaction and competitive pressure components as defined in Molnar and Kapitany's basic model (Model 1 in Tables B8 and B9, Annex B) developed for Hungary (section 2.1). The comparisons between Romania and Hungary, however, are limited by 1. differences between the dependent variables (see Table A1 and A2, Annex A) and 2. differences in the methodologies of the two surveys.

Thus, the basic model for Romania considers the following **'objective' determinants** at the individual and household levels:

a) Deciles of equalized household monetary income for September 2003.

b) Ownership of an automobile as indicator for household wealth. Information regarding holiday house is not included in POB OSF 2003.

c) Three disadvantaged groups from the labour market perspective which are: *casual workers* (7% of the sample defined as people that work on casual basis in the absence

of a work contract, mostly day laborer in agriculture), *unemployed* (4.5% of the sample - self-declared as searching for job regardless if they are officially registered or not; those unemployed that declared to be active in the informal sector were categorized as casual workers and not as unemployed) and *disabled* (8.2% of the sample - group which contains both disabled persons and retired on disability grounds). The marginal status on the labour market refers to individuals.

d) A fourth group of disadvantaged population corresponds to Molnar and Kapitany's 'living on subsidies'. In this respect, a dummy variable takes value '1' for all those persons that are not members of a disadvantaged group from the labour market perspective but belong to households for which a low-level subsidy (unemployment benefit, child allowance, minimum income guarantee, social scholarship) represented 'the main source of income' (self-declared) in 2003 (2.3% of the sample). Thus, 'living on subsidies' relates more to income than to labour market status and refers more to household than to individual.

e) Individual's age and education broken-down for comparability reasons in young (18-39 years), middle-aged (40-54 years), and elderly (55 years or more), respectively elementary (graduated 8 classes at most), secondary and tertiary education.

f) Residency is included in the model due to the important gap between urban and rural areas on many dimensions (infrastructure, quality of life, access to services etc.) relevant for individual satisfaction. However, as a large body of literature shows, urban residents are less satisfied due to their higher expectations.

Unlike Molnar and Kapitany, we collapsed the satisfaction variables into two categories (satisfied/ dissatisfied) and used logit regression models. The reference category relates to persons middle-aged with secondary education, not disadvantaged on the labour market, from households with monthly monetary income in the middle deciles (5 and 6) and not living on subsidies. Regression estimates are presented in Tables C6 to C9 (Annex C).

Individuals from households with monetary income below medium have significantly lower probability to report satisfaction both with household financial situation and with life in general. Persons from households with above-average income have the same probability to declare 'satisfied' as those from average-income households, except for individuals from households in the highest (10^{th}) decile who have significantly higher odds to report satisfaction. Thus, what makes the difference in the occurrence of satisfaction (both with household financial situation and with life in general) is whether the household monetary income is below average or among the highest. The income gap between the 7-9^{th} decile and the middle 5-6^{th} deciles does not mirror in significantly more satisfaction.

As in the case of Hungary, household wealth has strong, positive and significant effect on individual's satisfaction. Noteworthy, household monthly income is more influent than wealth regarding satisfaction with household financial situation, whereas wealth variable (owning an automobile – 32% of the sample) has larger effects than income in determining general life satisfaction.

Marginal positions on the labour market represent strong determinants of dissatisfaction with life in general. Casual workers as well as unemployed have significantly lower probability to report life satisfaction than the rest of the population. Thus, in Romania as in Hungary, people 'living on the outskirts of activity' and on the border of activity and inactivity declare much lower general life satisfaction compared with the rest of the population.

Similarly, the group of disabled is less satisfied than average. This group, however, include both persons with severe health issues (disabilities) unable to work and disability pensioners

who chose (or were pushed) to retire for escaping redundancy (Preda et al, 2004). Consequently, this group relates to two different types of social disadvantages, one associated with health and the other referring to the labour market. In order to test which of the two affects more the life satisfaction we run a regression model that include two more predictors: dissatisfaction with health and "cannot afford the necessary medicines". As shown in Tables C6 and C8 (Model 2, Annex C) the inclusion of health related variables increases significantly the explanatory power of the model (R2 grows from 0.24 to 0.35 for life satisfaction and 0.22 to 0.29 for satisfaction with household financial situation) and cancels out the significance of age and "disabled group" variables. Thus, dissatisfaction of both the elderly and the group of disabled is mainly explained by their health related problems combined with poor access to health services.

Marginal labour market status, nonetheless, has no effect on satisfaction with household financial situation when household income and wealth are controlled. Two distinct explanations are appropriate here. First refer to the disabled and the unemployed groups. These two groups are distributed rather normally across the household income deciles, except for a slight over-representation in the 2^{nd}-4^{th} deciles. In other words disabled persons and unemployed distribute between poor, medium or richer households in a manner similar to the entire population. Correspondingly, their satisfaction with household financial situation do not differ significantly from that of the entire population. The second explanation refers to the group of casual workers. In their case, the distribution across household income deciles is strongly biased: 30% belong to households in the lowest decile and 19% in the second opposed to only 24% in the 6-to-10th deciles. Thus, the subjective assessment appears in contradiction with the 'objective'[19] one. But casual workers are mostly (76%) rural residents, young and very poorly educated (44%), profile which is associated with a low level of expectations. Particularly the low level of expectations (in combination with the small number of cases) we think that explains the lack of significance.

In Romania unlike in Hungary, living on subsidies proved insignificant in relation to satisfaction. On the one hand, data from BOP OSF survey are certainly 'weaker' than the Hungarian Household Budget Survey in measuring factual data at the household level. On the other hand, the number of cases is too small. Further analysis is needed in order to test the effects of living on subsidies over satisfaction in Romania.

With respect to relation between age and satisfaction we have already mentioned that the Romanian data do not comply the U-shaped quality. The regression models confirm this result. Thus, compared to the middle-aged population, the young have higher probability to report life satisfaction whereas elderly have lower. Also the probability of satisfaction with household financial situation increases for young (18-39 years). By contrast, all other things equal, elderly have similar probability with the middle-aged people of being satisfied with their household financial resources.

Education, independent of income, has a positive effect on both satisfaction variables. Those with tertiary education have significantly higher probability of reporting satisfaction. However, when household income and wealth, labour market status, residency and age are controlled the satisfaction gap between elementary and secondary educated people is not significant. Only above-average education determines a significant satisfaction growth.

In the third part of our analysis we regress general life satisfaction against **'subjective' variables** related to uncertainty, expectations, poverty, inequality, and subjective mobility by

[19] It should be noted that household monetary income considerable smaller than the total income, particularly in the case of rural casual workers usually paid in-kind for their work.

controlling for a *core of variables* related to: natural logarithm of the equalized household monetary income, inclusion in any of the four disadvantaged groups discussed above (22% of the sample), age, education, and residency. Results of these models are discussed below. In all models, in determining satisfaction the core variables have the sign and significance previously described.

The higher the *uncertainty*, that is the more concerned the individual "that he/she or someone in the household might lose his/her job" (Table A7, Annex A), the lower his/her satisfaction with life. Also, *negative expectations* for the next 3 years that household financial situation or country economic situation will worsen decrease the probability of life satisfaction. Out of these three subjective variables[20], expectations related to the household financial situation proves to be the most important determinant of life satisfaction. Thus, independent of income, socio-demographics and job related uncertainty, people expecting their financial situation to worsen in the next 3 years are significantly less satisfied than the others. (Tables C7 and C9, Model 3, Annex C)

Related to poverty and inequality we developed one analysis at the community level and one analysis at the individual subjective level. Neither *poverty nor inequality measures at the community level* affect the well-being of the Romanians. In the POB FSD (2003) sample we have assigned to each individual the poverty rate, and the consumption Gini coefficient respectively (Pop, 2004), of his/her locality[21] determined for the year 2003. When region, residency (urban/rural) and household income are controlled, both poverty and inequality measures have insignificant influence on satisfaction (either with life or with the household financial situation). Thus, in a rapidly changing society, characterized by sudden and uncontrolled events, the informational value of the static distribution of income is weak, which is consistent with Senik's findings for Russia (2002).

We also studied the relation between satisfaction and *poverty/ inequality at the individual level* based on subjective variables. In this respect, we tested a model comparable with that developed by Molnar and Kapitany for Hungary (section 2.1, Model 3). This regression model of life satisfaction includes besides the core variables (see above) the following predictors:

a) *Subjective mobility*, which is estimated using the self-assessment of the individuals on the 10-point, scale from 1-poor and 10-rich. Respondents provided two assessments, one for 2000 and the other for the year 2003. By combining the two questions we estimate the social mobility between 2000 and 2003 as evaluated by the respondents. We distinguish five categories according to the value of (2003 position – 2000 position) as follows: "sharp downward subjective mobility" (7.5% of the sample) for values smaller or equal to -2 (which means that between 2000 and 2003 the position on the poor-rich scale deteriorated with at least 2 steps), "downward" for value –1 (13% of the sample), "no subjective mobility" for 0 (67% of the sample), "upward" for 1 (7% of the sample), and "sharp upward" for values 2 or larger (2.5% of the sample).

b) *Self-identification as "poor" or "in need"* on the scale from 1-poor to 10-rich regarding household situation in 2000 (selected in order to increase comparability with the Hungarian model). "Subjective poor" include people that self-positioned on steps 1 or 2 (17% of the sample). "Subjective in need" refer to people that positioned on steps 3 or 4 (42% of the sample). All the other situations ("non-poor") are included in the

[20] Four logit regression models were tested, one for each variable and one including all three variables. All models based on 1,663 valid cases and the corresponding Nagelkerke R Square was 0.21 (job related uncertainty), 0.22 (negative expectations related to country economic situation in the next 3 years), 0.24 (negative expectations related to household financial situation in the next 3 years), and 0.24 (all variables included). The estimates of the last model are presented in (Tables C7 and C9, Model 3, Annex C).

[21] The sample covers 141 localities. In each locality there are 1-3 sampling points, except the capital city Bucharest with 20 sampling points (193 sampling points overall). In each sampling point between 10-15 people were randomly selected.

reference group and consequently are not included in the regression. (See Table A4, Annex A)

c) Because in a transforming society as Romania, the static inequality conveys weak informational content, POB FSD 2003 measured the *perceived dynamic of inequality* based on the question: "Compared to 1995-1996 you would say that the difference between the poor and rich is now …?" (1 – "much lower" to 7 – "much higher"). "The difference between rich and poor" was assessed as "much higher" or "higher" by the great majority (79%) of the population (Table A9, Annex A). People perception is consistent with the dynamic of the Gini coefficient (Deliverable 14, 2004).

All three dimensions - subjective mobility, self-identification as poor and perceived inequality - prove to be significant determinants of life satisfaction when household monetary income, labour market position, age, education and residency are controlled. Upward subjective mobility significantly increases the probability of life satisfaction, whereas downward subjective mobility considerable decreases satisfaction. Subjective poor people and, to a smaller extent, persons subjective in need have significantly less general life satisfaction compared to the subjective non-poor. Finally, belief that inequality has highly increased during late transition significantly diminishes satisfaction with life. (Tables C7 and C9, Model 4, Annex C)

The three subjective predictors are even more powerful in explaining satisfaction with household financial situation as they cancel significance of all "objective" variables except for income and residency. (Table C9, Model 4, Annex C)

Particularly people that self-define "poor" and believe that in the last years their households have had a sharp downward mobility report the lowest life satisfaction, independent of household income.

In conclusion, satisfaction is the reflection of the objective conditions being determined by characteristics of the individual and his/her household: people from households with higher monetary incomes, particularly the younger and more educated, are more satisfied than the "common Romanian" and particularly than people poor and disadvantaged on the labour market. But, in the same time, satisfaction is also part of a more general "culture of openness" (Sandu, 1999: 50) defined by positive attitudes and assessments such as positive expectation for the future, lower level of job related uncertainty, upward subjective mobility, self-definition as "non-poor" and positive assessment of inequality. In concordance with the Hungarian data (Molnar and Kapitany in section 2.1), the Romanian POB OSF indicates that *how people perceive their actual social position, past mobility and prospect of upward mobility in the future represent the most powerful predictors of the subjective well-being.*

In terms of competitive pressure, the previous analysis shows that at the subjective level transition have resulted in a considerable satisfaction loss particularly for people exposed to poverty, unemployment, income decline, and increased inequality, which represent (together with corruption) the main perceived consequences of the transition in Romania. Besides the "objective" negative effects of the transition shock, the perception of increasing competitive pressure as "danger" for self (and significant others) lowers further the level of individual satisfaction.

The main policy relevant lessons of the analysis for Romania refer to: 1. marginal labour market status represents a major element of dissatisfaction with own life (alike in Hungary); 2. elderly are more dissatisfied than average particularly if their health is not satisfactory and they cannot afford the necessary medicines or have poor access to health services and 3. in the

uncertainty environment of transition, tertiary education by significantly increasing life chances represents a source of life satisfaction.

Income satisfaction in Slovenia 1988-1999

This analysis of income satisfaction is based on the following question from the 1988 and 1993 Household Expenditure Survey: 'In relation to your costs of living, your family income is: (1) very insufficient, (2) insufficient, (3) sufficient, (4) amply sufficient?' In the surveys, this question was – as a rule – posed to the head of household.

With the implementation of methodological changes in 1997 the question was rephrased and posed (to head of household) as: 'Considering your monthly disposable income, is your household able to make ends meet: (1) with great difficulty, (2) with difficulty, (3) with some difficulty, (4) without difficulty, (5) with ease, (6) with great ease?' Due to small number of observations in the sixth rank ('ends meet with great ease') ranks 5 and 6 were merged under the common name 'ends meet with ease'. The data sample for the years 1997–1999 is therefore analysed using this modification.

As can be seen in Annex D, satisfaction with one's income rises with rising disposable income. Home ownership is also important for the perception of income satisfaction; a lower share of home-owners is characteristic of households that express greater dissatisfaction with their income; households which expressed greater dissatisfaction with their income also had a higher share of unemployed persons. Very low unemployment in the socialist era dramatically increased in the first years of transition. Homeownership also had largely increased between the 1988 and 1993 survey. This was due to the housing privatisation which was carried out in 1991 when the social housing stock was offered for sale to sitting tenants under very favourable conditions. Most sitting tenants opted for purchase, and the share of owner-occupied housing increased by some twenty percentage points after the privatisation was completed.

Noteworthy the share of households declaring their income to be 'very insufficient', 'insufficient', 'sufficient' and 'amply sufficient' in 1993 is quite similar to the corresponding shares in 1988. This might seem remarkable, considering the political, social and economic changes which have occurred in the years between 1988 and 1993. Thus, inflation in 1988 turned to hyperinflation in 1989, with the disintegration of Yugoslavia proceeding at full pace. Slovenia became an independent state in June 1991, followed by a brief period of falling output. Wages experienced a large drop and bottomed-out in 1992, when they amounted to only 71 per cent of their 1988 value (Statistical Yearbook of the Republic of Slovenia, 2003, p. 242). However, wages began increasing already in 1993, when they reached 79 per cent of their 1988 value. As 1988 was a year of high inflation, marked also by a growing perception of the imminent disintegration of the Yugoslav federation and increased uncertainty regarding the future; this 'wider' environment quite possibly had some influence on people's perception of economic well-being.

Answers to the income sufficiency question are analysed using the ordered probit model. For the model estimated for the years 1988 and 1993, the dependent variable is simply the answer to the income satisfaction question. It takes four values; without any loss in generality, the value '0' is taken if the respondent declares his (household) income as 'very insufficient', the value '1' responds to 'income insufficient', '2' to 'income sufficient' and value '3' to 'income amply sufficient'. In the 1997-1999 survey the dependent variable is the answer to the question on the difficulty of making ends meet: the value '0' is taken if the respondent

declares that 'ends meet with great difficulty', the value '1' is taken if the respondent states that 'ends meet with difficulty', etc.

The explanatory variables and the estimated values of the relevant coefficients are presented in the following Table 1.

Table 1. Results of estimation of ordered probit model for income satisfaction, Slovenia

Year	1988	1993	1997-99
ln y – natural logarithm of disposable household monthly income	0.9876**	1.0434**	1.4251**
	(0.0422)	(0.0424)	(0.0342)
ln fs - natural logarithm of family size	–0.5651**	–0.7567**	–1.3867**
	(0.0788)	(0.0732)	(0.0694)
S60 - share of persons aged over 60 in household	0.2549*	0.2129*	0.2388*
	(0.0822)	(0.0807)	(0.0672)
SCH - share of children (members under 19 years of age) in household	–0.3889*	–0.4627**	–0.4358**
	(0.1178)	(0.1146)	(0.0854)
SUN - share of unemployed members in household	–1.0885*	–1.4351**	–0.6566**
	(0.3445)	(0.1535)	(0.1127)
DAH - dummy with '1' if family lives in owner occupied dwelling	0.2546**	0.3507**	0.2234**
	(0.0444)	(0.0637)	(0.0502)
Sample size	3250	3270	3867
$LogL$	–3088.6	–3079.2	–4872.4
χ^2	589.1**	846.5**	1474.8**

Note: Each estimate includes the value of the regression coefficient and the respective asymptotic standard error (in brackets). Notations * and ** indicate statistical significance at 0.01 and 0.001 level, respectively.

All estimated regression coefficients from Table 2 are of the expected sign, and have similar values for the two comparable cross-sections (1988 and 1993). Different estimated values of the respective regression coefficients based on the 1997-1999 data sample are due to the aforementioned methodological changes of the survey and changes in the question posed. Let us examine the effects of these variables in more detail.

The probability of a family being satisfied with its income, *ceteris paribus*, increases with rising disposable income and decreases with family size. Also, older households, i.e. households with at least one member older than 60 years, are, *ceteris paribus*, more likely to be satisfied with their income than younger households. According to Katona *et al*. (1971) age is a proxy for reality; the possibilities of the young become the constraints of the elderly and they are also perceived as such. Older households have not only lower aspirations, but also lower real needs as their wealth, accumulated during the life cycle, is substantially greater than that of younger households - the most important form of wealth being dwellings. Households living in their own apartment or house are, *ceteris paribus*, more likely to be satisfied with their income than households living in rented apartments. This is not surprising, considering that the possession of an apartment or a house is something that most households in Slovenia strive to achieve. Thus, families that live in rented apartments or houses perceive much greater income needs, as they must accumulate sufficient savings for the initial investment in housing construction or purchase. Households with unemployed members or children are, *ceteris paribus*, less likely to be satisfied with their income.

Overall, our findings are in broad agreement with other studies of subjective economic well-being in transition countries. For example, the very strong negative effect of unemployment on subjective economic well-being has been shown in Hayo and Seifert (2002); they estimate an ordered logit model, using pooled cross-section and time series data, based on several transition economies. Ravallion and Lokshin (2002), using the Russian Longitudinal Monitoring Survey (RLMS) for the analysis show that household income (positive sign), household size (negative sign) and the share of unemployed (negative sign) are all statistically

highly significant[22]; their results are thus quite similar to ours. However, the share of children exhibits a different sign and in their analysis does not appear to be a significant predictor of subjective economic welfare.

I.3 Conclusions

This section presented empirical analysis of subjective well-being measured by life satisfaction and satisfaction with household material situation (Hungary), satisfaction with household financial situation (Romania), and satisfaction with income (Slovenia). Country studies were realized independently based on poorly comparable data. However, the between countries comparisons were as extended as possible (given the available data) by using comparable explanatory models.

Beyond its limits, our analysis highlights that in all three countries "objective" household income have significant and positive effects on satisfaction, whereas unemployment significantly diminishes well-being. Thus, as the countries recover from the transition shock, growing national income starts to mirror in increasing households income and more new sustainable jobs are created is to be expected an increasing general level of satisfaction.

Secondly, the analysis on Hungary and Romania shows that health related problems negatively affects people satisfaction, while education (particularly the tertiary one) significantly increases satisfaction. Thus, social policies in health and education areas that succeed to cushion population against transition adversities increase both life chances and general level of satisfaction of the population.

Lastly, the "satisfaction loss" is not an effect of increasing competitive pressure alone it is also a matter of subjective definition of transition as "dangerous" for self and significant others. In the general environment of uncertainty and rapid change, how people perceive their actual social position, past mobility and prospect of upward mobility in the future represent very powerful predictors of the subjective well-being both in Hungary and Romania.

[22] The question asked in this survey was: 'Please imagine a 9-step ladder where on the bottom, the first step, stand the poorest people, and on the highest step, the ninth, stand the rich. On which step are you today?' (Ravallion, Lokshin, 2002). The ordered probit model was used for estimation.

I.3 Annexes

Annex A: Subjective questions common to Hungary and Romania

Table A 1. General life satisfaction

HU: All things considered to what extent are you satisfied or dissatisfied with your life in general?

	Percent
Very dissatisfied	15
Fairly dissatisfied	22
Neither satisfied nor dissatisfied	39
Fairly satisfied	21
Very satisfied	2
Doesn't know, no answer	1
Total	100
N	3540

Source: Supplementary interview attached to the *Hungarian Household Budget Survey*, 2002 (questionning in March 2003).

RO: As a whole, how satisfied are you with your life in general?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 not at all satisfied	363	17.8	19.1	19.1
	2 rather dissatisfied	833	40.9	43.9	63.0
	3 rather satisfied	653	32.1	34.4	97.4
	4 very satisfied	49	2.4	2.6	100.0
	Total	1898	93.3	100.0	
Missing	System	137	6.7		
Total		2035	100.0		

Source: Romanian *Public Opinion Barometer* 2003 (Open Society Foundation Bucharest).

Table A 2. Satisfaction with household economic situation

HU: To what extent are you satisfied or dissatisfied with the ***material situation*** of your household?

	Percent
Very dissatisfied	21
Fairly dissatisfied	28
Neither satisfied nor dissatisfied	31
Fairly satisfied	18
Very satisfied	1
Doesn't know, no answer	1
Total	100
N	3540

Source: Supplementary interview attached to the *Hungarian Household Budget Survey*, 2002 (questionning in March 2003).

RO: How satisfied are you with your household ***financial situation***?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 not at all satisfied	517	25.4	25.6	25.6
	2 rather dissatisfied	662	32.5	32.8	58.4
	3 neither satisfied, nor dissatisfied	418	20.5	20.7	79.1
	4 rather satisfied	392	19.3	19.4	98.6
	5 very satisfied	29	1.4	1.4	100.0
	Total	2018	99.2	100.0	
Missing	System	17	.8		
Total		2035	100.0		

Source: Romanian *Public Opinion Barometer* 2003 (Open Society Foundation Bucharest).

Table A 3. Self-positioning on the poor-rich scale in present

HU: To which step would you place your household at the present time on a 9-step ladder (first step means poorest, ninth step means richest)?

RO: Compared to the others, where do you place yourself on the following scale?

Country/ Year	1 Poor	2	3	4	5	6	7	8	9 Rich	10* Rich	DK	Total	N
Hungary 2002	4	7	19	27	26	10	4	0	0	-	3	100	3540
Romania Oct. 2003	7	13	23	21	21	8	3	1	0	0	3	100	2035

Source: Supplementary interview attached to the *Hungarian Household Budget Survey*, 2002 (questionning in March 2003) and the *Romanian Public Opinion Barometer* 2003 (Open Society Foundation Bucharest).

*Asked only in Romania.

Table A 4. Self-positioning on the poor-rich scale for the year 2000

HU and RO: On which step of the previous poor-rich scale was your household in 2000?

Country/ Year	1 Poor	2	3	4	5	6	7	8	9 Rich	10* Rich	DK	Total	N
Hungary 2002	4	8	18	28	26	10	3	1	0	-	2	100	3540
Romania Oct. 2003	7	11	22	20	22	10	4	2	0	0	3	100	2035

Source: Supplementary interview attached to the *Hungarian Household Budget Survey*, 2002 (questionning in March 2003) and the *Romanian Public Opinion Barometer* 2003 (Open Society Foundation Bucharest).

*Asked only in Romania.

Table A 5. Expectations for the next 3 years with the country economic situation

HU: How will the economic situation of Hungary change in the next 3 years, considering also the effect of Hungary's joining the EU?

	%	% of real responses
Considerably declines	6	8
Slightly declines	13	16
Doesn't change	34	41
Slightly improves	26	32
Considerably improves	3	3
Doesn't know, no answer	18	-
Total	100	100
N	3540	

Source: Supplementary interview attached to the *Hungarian Household Budget Survey*, 2002 (questionning in March 2003).

RO: For the next three years, you expect the economic situation of the country to be ...?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 much better	21	1.0	1.2	1.2
	2 better	743	36.5	42.8	44.0
	3 same	597	29.3	34.4	78.4
	4 worse	318	15.6	18.3	96.7
	5 much worse	58	2.9	3.3	100.0
	Total	1737	85.4	100.0	
Missing	System	298	14.6		
Total		2035	100.0		

Source: Romanian *Public Opinion Barometer* 2003 (Open Society Foundation Bucharest).

Table A 6. Expectations for the next 3 years with the household financial situation

HU: How will the financial situation of your household change in the next 3 years, considering also the effect of Hungary's joining the EU?

	%	% of real responses
Considerable declines	6	7
Slightly declines	16	20
Doesn't change	21	27
Slightly improves	32	40
Considerable improves	5	6
Doesn't know, no answer	20	-
Total	100	100
N	3540	

Source: Supplementary interview attached to the *Hungarian Household Budget Survey*, 2002 (questionning in March 2003).

RO: For the next three years, you expect your household financial situation to be ...?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 much better	38	1.9	2.1	2.1
	2 better	809	39.8	43.9	46.0
	3 same	587	28.8	31.9	77.9
	4 worse	339	16.7	18.4	96.3
	5 much worse	69	3.4	3.7	100.0
	Total	1842	90.5	100.0	
Missing	System	193	9.5		
Total		2035	100.0		

Source: Romanian *Public Opinion Barometer* 2003 (Open Society Foundation Bucharest).

Table A 7. Uncertainty regarding job

HU: To what extent are you concerned about the idea that you, or somebody else in your family, lose her/his job?

	%	% of real responses
Very concerned	32	40
Fairly concerned	22	28
A little bit concerned	18	22
Not at all concerned	9	11
Non specific, doesn't know, no answer	19	-
Total	100	100
N	3540	

Source: Supplementary interview attached to the *Hungarian Household Budget Survey*, 2002 (questionning in March 2003).

RO: How worried are you that someone in your household (including yourself) might lose his/her job?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 not at all worried	416	20.4	33.4	33.4
	2 little worried	186	9.1	14.9	48.3
	3 quite worried	349	17.1	28.0	76.3
	4 very worried	295	14.5	23.7	100.0
	Total	1246	61.2	100.0	
Missing	7 Not applicable**	555	27.3		
	8 Uncertain*	230	11.3		
	9 No answer	4	.2		
	Total	789	38.8		
Total		2035	100.0		

*There are household members with jobs but their prospects are unclear for the respondent **No member of the household has a job.

Source: Romanian *Public Opinion Barometer* 2003 (Open Society Foundation Bucharest).

Table A 8. Perception of the chances to find a new job

HU: Imagine that tomorrow you lose your job! How certain are you that you will be able to find another job not worse than the present one?

	%	% of real responses
Absolutely uncertain	24	42
Fairly uncertain	21	38
Fairly certain	8	15
Absolutely certain	3	5
Non specific, doesn't know, no answer	44	-
Total	100	100
N	3540	

Source: Supplementary interview attached to the *Hungarian Household Budget Survey*, 2002 (questioned in March 2003).

RO: Imagine that tomorrow you or someone in your household lose your job! Which are the chances to find another job not worse than the present one?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Absolutely uncertain	271	13.3	28.2	28.2
	2 Fairly uncertain	450	22.1	46.8	75.0
	3 Fairly certain	188	9.2	19.6	94.6
	4 Absolutely certain	52	2.6	5.4	100.0
	Total	961	47.2	100.0	
Not applicable, doesn't know, no answer		1074	52.8		
Total		2035	100.0		

Source: Romanian *Public Opinion Barometer* 2003 (Open Society Foundation Bucharest).

Table A 9. Perceived dynamic of inequality

HU: How have the income and wealth inequalities changed in Hungary from the middle of the 1990s?

	Percent
Considerably increased	54
Increased	30
Slightly increased	6
No significant change	4
Slightly decreased	1
Decreased	1
Considerably decreased	0
Doesn't know, no answer	4
Total	100
N	3540

Source: Supplementary interview attached to the *Hungarian Household Budget Survey*, 2002 (questioned in March 2003).

RO: Compared to 1995-1996 you would say that the difference between the poor and rich is now (2003) …?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 much higher	701	34.4	35.7	35.7
	2 higher	911	44.8	46.4	82.1
	3 somewhat higher	179	8.8	9.1	91.2
	4 same	139	6.8	7.1	98.3
	5 somewhat lower	22	1.1	1.1	99.4
	6 lower	10	.5	.5	99.9
	7 much lower	1	.0	.1	100.0
	Total	1963	96.5	100.0	
Missing	System	72	3.5		
Total		2035	100.0		

Source: Romanian *Public Opinion Barometer* 2003 (Open Society Foundation Bucharest).

Table A 10. Attitude toward redistribution: restrict the income of the rich?

HU and RO: Do you agree that the government should restrict the income of the rich?

	HUNGARY Percent	ROMANIA Percent
Essentially disagree	6	11
More disagree than agree	13	17
More agree than disagree	27	27
Essentially agree	45	36
Doesn't know, no answer	9	9
Total	100	100
N	3540	2035

Source: Supplementary interview attached to the *Hungarian Household Budget Survey*, 2002 (questionning in March 2003) and the *Romanian Public Opinion Barometer* 2003 (Open Society Foundation Bucharest).

RO: How do you think that most Romanian rich people made their fortunes?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 personal effort and merit	166	8.2	8.8	8.8
	2 chance	117	5.7	6.2	15.1
	3 connections	494	24.3	26.3	41.4
	4 by breaking the law	1010	49.6	53.8	95.3
	5 else, namely …	89	4.4	4.7	100.0
	Total	1876	92.2	100.0	
Missing	System	159	7.8		
Total		2035	100.0		

Source: Romanian *Public Opinion Barometer* 2003 (Open Society Foundation Bucharest).

Table A 11. Attitude toward redistribution: more support for the poor?

HU and RO: Do you agree that the government should allocate more income to the poor?

	HUNGARY Percent	ROMANIA Percent
Essentially disagree	3	1
More disagree than agree	6	9
More agree than disagree	28	37
Essentially agree	58	51
Doesn't know, no answer	5	2
Total	100	100
N	3540	2035

Source: Supplementary interview attached to the *Hungarian Household Budget Survey*, 2002 (questionning in March 2003) and the *Romanian Public Opinion Barometer* 2003 (Open Society Foundation Bucharest).

RO: Why are there poor people in our society? (multiple response question)

	Percent
Because they are unlucky	14.4
Because they are lazy	35.6
Because they were born in a poor family	42.0
Due to the society we live in	98.0
Doesn't know, no answer	10
N	2035

Source: Romanian *Public Opinion Barometer* 2003 (Open Society Foundation Bucharest).

Annex B: Hungarian Survey

Table B 1. How does your household get along with its monthly disposable income?

	Percent
With great difficulty	12
With difficulty	18
With some difficulty	30
Reasonably	35
Easily	4
Very easily	0
Doesn't know, no answer	1
Total	100
N	3540

Source: Supplementary interview attached to the *Hungarian Household Budget Survey*, 2002 (questioned in March 2003).

Table B 2. Do you see any chance for your household to obtain a better financial position?

	Percent
No chance	29
Work prospects	43
Health status prospects	13
Children's future prospects	8
Other	3
Doesn't know, no answer	4
Total	100
N	3540

Source: Supplementary interview attached to the *Hungarian Household Budget Survey*, 2002 (questioned in March 2003).

Table B 3. What kind of effect will have Hungary's joining the EU on the chances of the Hungarian employees?

	%	% of real responses
Negative effect	12	17
No significant effect	18	40
Positive effect	31	43
Doesn't know, no answer	29	-
Total	100	100
N	3540	

Source: Supplementary interview attached to the *Hungarian Household Budget Survey*, 2002 (questioned in March 2003).

Table B 4. What kind of effect will have the stronger market competition, caused by our joining to the EU, on the interest of the Hungarian consumers?

	%	% of real responses
Negative effect	19	28
No significant effect	21	29
Positive effect	30	43
Doesn't know, no answer	30	-
Total	100	100
N	3540	

Source: Supplementary interview attached to the *Hungarian Household Budget Survey*, 2002 (questioned in March 2003).

Table B 5. According to your expectations, how will your child(ren) live in the future compared with you? (Respondents having child)

	%	% of real responses
Much worse	1	1
Worse	7	9
Essentially in the same way	26	29
Better	47	55
Much better	6	6
Doesn't know, no answer	13	-
Total	100	100
N	2288	

Source: Supplementary interview attached to the *Hungarian Household Budget Survey*, 2002 (questioned in March 2003).

Table B 6. How are your grown-up children living at present time compared with you (only for children living outside of the household? (Respondents having grown-up children)

	Percent
Much better	1
Better	10
Essentially in the same way	36
Worse	43
Much worse	5
Doesn't know, no answer	5
Total	100
N	1414

Source: Supplementary interview attached to the *Hungarian Household Budget Survey*, 2002 (questioned in March 2003).

Table B 7. How has the financial situation of your family changed during the last three years? (Asked in the HBS, one answer per household)

	Percent
Considerably declined	13
Slightly declined	27
Did not change	43
Slightly improved	15
Considerably improved	1
Doesn't know, no answer	1
Total	100
N	3540

Source: *Hungarian Household Budget Survey*, 2002.

Table B 8. Material satisfaction, ordered logit estimates (N=2979), Hungary 2002

	(Model 1)	(Model 2)	(Model 3)
2nd quintile of equalised income	0.65 (0.19)**		
3rd quintile	1.06 (0.21)**		
7th decile	0.72 (0.24)**		
8th decile	1.05 (0.25)**		
9th decile	1.23 (0.27)**		
Lower 5 percentiles of 10th decile	2.00 (0.28)**		
Upper 5 percentiles of 10th decile	2.17 (0.39)**		
Ln(equalised income)		1.30 (0.21)**	0.80 (0.19) **
Casual workers	-1.09 (0.27)**	-0.78 (0.27)**	
Unemployed	-0.97 (0.23)**	-0.62 (0.22)**	
Disability pensioners	-0.62 (0.18)**	-0.49 (0.17)**	
Living on subsidies	-1.54 (0.45)**	-1.38 (0.48)**	
Marginal activity groups together***			-0.40 (0.14)**
Adult hh-members of marginal activity groups	-0.57 (0.17)**		
Young (18-39 ages)	0.52 (0.13)**	0.35 (0.13)**	
Middle-aged (40-54 ages)			-0.48 (0.11)**
Elderly (55-X ages)	0.68 (0.13)**	0.67 (0.12)**	
Highest qualif. ≤ elementary school (8 classes)		-0.28 (0.11)*	
Graduated	0.40 (0.17)**		
Passenger car	0.50 (0.12)**		
Holiday house			-0.48 (0.20)*
Subjective mob: no change in mat. situation		0.84 (0.13) **	0.55 (0.13) **
Subjective mob: slightly improved mat. sit.		1.20 (0.19) **	0.75 (0.19) **
Opinion: inequalities considerably increased		-0.32 (0.10)**	
Restrict inc. of rich: more disagree than agree		0.85 (0.15) **	0.76 (0.16) **
Restrict inc. of rich: more agree than disagree		0.34 (0.11) **	0.30 (0.11) **
Subjective position in 2000: level 1 (from 9)			-4.64 (0.51)**
Subjective position in 2000: level 2 (from 9)			-3.81 (0.43)**
Subjective position in 2000: level 3 (from 9)			-2.85 (0.37)**
Subjective position in 2000: level 4 (from 9)			-2.14 (0.34)**
Subjective position in 2000: level 5 (from 9)			-1.37 (0.32)**
Subjective position in 2000: level 6 (from 9)			-0.86 (0.35)*
SubjPos(2002) – SubjPos(2000) ≤ -2			-3.47 (0.40)**
SubjPos(2002) – SubjPos(2000) = -1			-2.43 (0.29)**
SubjPos(2002) – SubjPos(2000) = 0			-1.53 (0.25)**
SubjPos(2002) – SubjPos(2000) = 1			-0.82 (0.28)**
Pseudo R^2	0.082	0.104	0.169

Source: Supplementary interview attached to the *Hungarian Household Budget Survey*, 2002 (questioned in March 2003).

Notes: Dependent variable: satisfaction with the material situation of the household on a five-level scale (very dissatisfied, fairly dissatisfied, neither satisfied or dissatisfied, fairly satisfied, very satisfied). Robust standard errors adjusted for clustering on households in parantheses. * significant at 5% level, ** significant at 1% level, ***That is casual workers, unemployed, disability pensioners and other people living on subsidies together.

Table B 9. Life satisfaction, ordered logit estimates (N=2979), Hungary 2002

	(Model 1)	(Model 2)	(Model 3)
2nd quintile of equalised income	0.37 (0.18) *		
3rd quintile	0.60 (0.19)**		
7th decile	0.46 (0.22) *		
8th decile	0.76 (0.25)**		
9th decile	0.74 (0.24)**		
Lower 5 percentiles of 10th decile	1.52 (0.29)**		
Upper 5 percentiles of 10th decile	1.73 (0.34)**		
Ln(equalised income)		1.05 (0.19)**	0.53 (0.17)**
Casual workers	-1.59 (0.29)**	-1.38 (0.28)**	
Unemployed	-1.01 (0.24)**	-0.70 (0.21)**	
Disability pensioners			
Living on subsidies	-1.12 (0.41)**		
Marginal activity groups together***			-0.39 (0.14)**
Adult hh-members of marginal activity groups	-0.52 (0.14)**		
Family contains permanently sick person	-0.28 (0.13) *	-0.34 (0.14) *	
Students	0.93 (0.24)**	0.84 (0.24)**	0.63 (0.22)**
Young (18-39 ages)	0.64 (0.13)**	0.48 (0.13)**	
Middle-aged (40-54 ages)			-0.44 (0.11)**
Elderly (55-X ages)	0.62 (0.12)**	0.60 (0.13)**	
Highest qualif. ≤ elementary school (8 classes)		-0.37 (0.12)**	
Graduated	0.69 (0.16) *		
Passenger car	0.47 (0.12)**		
Holiday house			
Subjective mob: no change in fin. situation		0.65 (0.12)**	0.40 (0.12)**
Subjective mob: slightly improved		0.95 (0.20)**	0.62 (0.19)**
Opinion: inequalities considerably increased		-0.35 (0.10)**	
Restrict inc. of rich: more disagree than agree		0.83 (0.15)**	0.76 (0.17)**
Restrict inc. of rich: more agree than disagree		0.26 (0.11) *	0.23 (0.11) *
Subjective position in 2000: level 1 (from 9)			-3.66 (0.49)**
Subjective position in 2000: level 2 (from 9)			-3.68 (0.36)**
Subjective position in 2000: level 3 (from 9)			-2.83 (0.32)**
Subjective position in 2000: level 4 (from 9)			-2.27 (0.30)**
Subjective position in 2000: level 5 (from 9)			-1.54 (0.29)**
Subjective position in 2000: level 6 (from 9)			-1.02 (0.30)**
SubjPos(2002) – SubjPos(2000) ≤ -2			-3.37 (0.40)**
SubjPos(2002) – SubjPos(2000) = -1			-2.15 (0.34)**
SubjPos(2002) – SubjPos(2000) = 0			-1.28 (0.30)**
SubjPos(2002) – SubjPos(2000) = 1			-0.70 (0.34) *
Pseudo R^2	0.077	0.091	0.140

Source: Supplementary interview attached to the *Hungarian Household Budget Survey*, 2002 (questioned in March 2003).

Notes: Dependent variable: satisfaction with the life in general on a five-level scale (very dissatisfied, fairly dissatisfied, neither satisfied or dissatisfied, fairly satisfied, very satisfied). Robust standard errors adjusted for clustering on households in parantheses. * significant at 5% level, ** significant at 1% level, ***That is casual workers, unemployed, disability pensioners and other people living on subsidies together.

Annex C: Romanian Survey

Table C 1. How satisfied are you with the money you have?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 not at all satisfied	784	38.5	39.4	39.4
	2 rather dissatisfied	750	36.9	37.7	77.0
	3 rather satisfied	418	20.5	21.0	98.0
	4 very satisfied	39	1.9	2.0	100.0
	Total	1991	97.8	100.0	
Missing	System	44	2.2		
Total		2035	100.0		

Source: Romanian *Public Opinion Barometer* 2003 (Open Society Foundation Bucharest).

Table C 2. How satisfied are you with your health?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 not at all satisfied	316	15.5	15.6	15.6
	2 rather dissatisfied	606	29.8	29.9	45.4
	3 rather satisfied	878	43.1	43.3	88.7
	4 very satisfied	230	11.3	11.3	100.0
	Total	2030	99.8	100.0	
Missing	System	5	.2		
Total		2035	100.0		

Source: Romanian *Public Opinion Barometer* 2003 (Open Society Foundation Bucharest).

Table C 3. Compared with the previous year, your life is now...?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 much better	18	.9	.9	.9
	2 better	349	17.1	17.3	18.2
	3 same	825	40.5	40.8	59.0
	4 worse	725	35.6	35.9	94.9
	5 much worse	104	5.1	5.1	100.0
	Total	2021	99.3	100.0	
Missing	System	14	.7		
Total		2035	100.0		

Source: Romanian *Public Opinion Barometer* 2003 (Open Society Foundation Bucharest).

Table C 4. In the next year you think that you will live ...?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 much better	21	1.0	1.2	1.2
	2 better	569	28.0	32.6	33.8
	3 same	669	32.9	38.3	72.0
	4 worse	443	21.8	25.3	97.4
	5 much worse	46	2.3	2.6	100.0
	Total	1748	85.9	100.0	
Missing	System	287	14.1		
Total		2035	100.0		

Source: Romanian *Public Opinion Barometer* 2003 (Open Society Foundation Bucharest).

Table C 5. Monetary income (million ROL)

		N	Mean	Std. Deviation
Respondent income in September 2003	1 Very large city over 200.000 inhabitants	467	3.188	2.543
	2 Large city 100-200.000 inhabitants	160	3.313	3.461
	3 Medium city, 30-100.000 inhabitants	212	2.606	2.236
	4 Small city, below 30.000 inhabitants	154	2.631	3.273
	5 Village administrative center of a commune	558	1.873	2.174
	6 Village	310	1.491	1.459
	Total	1861	2.409	2.514
Household total monetary income in September 2003	1 Very large city over 200.000 inhabitants	444	7.347	5.678
	2 Large city 100-200.000 inhabitants	150	6.796	4.761
	3 Medium city, 30-100.000 inhabitants	207	6.002	4.455
	4 Small city, below 30.000 inhabitants	149	6.310	5.234
	5 Village administrative center of a commune	541	4.629	4.286
	6 Village	310	3.492	3.716
	Total	1801	5.581	4.919
Household total monetary income per capita in September 2003	1 Very large city over 200.000 inhabitants	444	2.808	2.018
	2 Large city 100-200.000 inhabitants	150	2.369	1.548
	3 Medium city, 30-100.000 inhabitants	207	2.079	1.575
	4 Small city, below 30.000 inhabitants	149	2.058	1.781
	5 Village administrative center of a commune	541	1.474	1.280
	6 Village	310	1.115	1.093
	Total	1801	1.934	1.682

Source: Romanian *Public Opinion Barometer* 2003 (Open Society Foundation Bucharest).

Table C 6 General life satisfaction 'objective' determinants, logit regression, Romania 2003

	Model1		Model2	
	Sig.	Exp(B)	Sig.	Exp(B)
Income decile 1 (the lowest 10%)	.000	3.875	.000	2.853
Income decile 2	.000	4.063	.000	3.541
Income decile 3	.000	2.129	.030	1.645
Income decile 4	.000	2.342	.002	2.010
Income decile 7	.056	1.459	.146	1.356
Income decile 8	.227	1.260	.075	1.438
Income decile 9	.336	.833	.970	.993
Income decile 10 (the highest 10%)	.002	.536	.084	.694
Household own an automobile	.000	.482	.000	.614
Casual workers	.002	2.085	.007	1.955
Unemployed	.000	3.336	.000	3.255
Disabled	.051	1.556	.734	1.088
Young 18-39 years	.000	.512	.056	.757
Elderly 55 years or more	.007	1.491	.333	1.168
Elementary education (maximum 8 grades)	.565	.920	.280	.846
Tertiary education	.009	.680	.029	.709
Residency (1=urban, 0=rural)	.000	2.063	.000	1.966
Not at all satisfies with personal health			.000	9.025
Rather unsatisfied with personal health			.000	2.743
Cannot afford the necessary medicines			.000	2.421
Constant	.000	.002	.000	.000
Number of cases	*1,898*		*1,898*	
Nagelkerke R Square	*0.24*		*0.35*	

Data: POB FDS 2003. Dependent Variable: Life satisfaction (1=satisfied, 0=dissatisfied)

Notes: *Income* – natural logarithm of monetary monthly household income equalized using OECD scale (see footnote 14 and 15). In-kind income from self-production is not included. All variables are dummy. Definitions of variables presented in section 2.2.

Table C 7 General life satisfaction 'subjective' determinants, logit regression, Romania 2003

	Model3		Model4	
	Sig.	Exp(B)	Sig.	Exp(B)
'Objective' predictors:				
Income	.000	2.398	.000	1.910
Disadvantaged groups	.000	1.856	.003	1.623
Young 18-39 years	.001	.609	.001	.605
Elderly 55 years or more	.001	1.720	.002	1.647
Elementary education (maximum 8 grades)	.673	1.068	.840	.968
Tertiary education	.016	.678	.175	.798
Residency (1=urban, 0=rural)	.000	2.358	.000	2.066
Little worried to lose job	.047	1.511		
Quite worried to lose job	.530	1.105		
Very worried to lose job	.079	1.355		
Expect economic situation of the country to worsen in the next 3 years	.614	1.092		
Expect household financial situation to worsen in the next 3 years	.000	2.988		
Sharp downward subjective mobility			.000	3.817
Downward subjective mobility			.001	1.818
Upward subjective mobility			.015	.592
Sharp upward subjective mobility			.000	.228
Subjective poor			.000	4.767
Subjective in need			.000	2.168
Believe that inequality has considerable increased since 1995/6			.020	1.394
Constant	.000	.000	.000	.000
Number of cases	*1,663*		*1,632*	
Nagelkerke R Square	*0.244*		*0.28*	

Data: POB FDS 2003. Dependent Variable: Life satisfaction (1=satisfied, 0=dissatisfied).

Notes: *Income* – natural logarithm of monetary monthly household income equalized using OECD scale (see footnote 15). In-kind income from self-production is not included. *Disadvantaged groups* – include groups with marginal positions on the labour market and 'living on subsidies' (see section 2.2). Excepting income all variables are dummy. *Concern of loosing job* defined as in Table A7 (Annex A) and split in three dummy variables for 'little concerned', 'fairly concerned', and 'very concerned' respectively. *Expectations regarding household financial situation* defined as in Table A6 (Annex A) and collapsed in two categories (1= situation will be "worse" or "much worse"); *Expectations regarding country economic situation* defined as in Table A5 (Annex A) and collapsed in two categories (1= situation will be "worse" or "much worse"). *Perceived dynamic of inequality* defined as in Table A9 (Annex A) and collapsed in two categories 1 = inequality in 2003 is "much higher" or "higher" compared to 1995-96. Definitions of variables subjective mobility and self-definition as poor/ in need presented in section 2.2.

Table C 8 'Objective' determinants of the satisfaction with household financial situation, logit regression, Romania 2003

	Model1		Model2	
	Sig.	Exp(B)	Sig.	Exp(B)
Income decile 1 (the lowest 10%)	.000	6.666	.000	4.857
Income decile 2	.000	3.956	.001	3.080
Income decile 3	.000	2.847	.004	2.304
Income decile 4	.001	2.558	.010	2.110
Income decile 7	.504	1.160	.754	1.075
Income decile 8	.849	.961	.938	1.017
Income decile 9	.181	.765	.423	.849
Income decile 10 (the highest 10%)	.000	.270	.000	.317
Household own an automobile	.000	.544	.007	.699
Casual workers	.069	1.716	.151	1.548
Unemployed	.200	1.605	.312	1.463
Disabled	.322	1.311	.944	1.020
Young 18-39 years	.012	.683	.472	.893
Elderly 55 years or more	.567	1.102	.408	.862
Elementary education (maximum 8 grades)	.740	1.060	.979	.995
Tertiary education	.001	.595	.003	.619
Residency (1=urban, 0=rural)	.000	2.189	.000	2.035
Not at all satisfies with personal health			.000	5.284
Rather unsatisfied with personal health			.000	2.102
Cannot afford the necessary medicines			.000	2.668
Constant			.000	.001
Number of cases	*2,035*		*2,035*	
Nagelkerke R Square	*0.22*		*0.29*	

Data: POB FDS 2003. Dependent Variable: Satisfaction with household financial situation (1=satisfied, 0=dissatisfied).

Notes: *Income* – natural logarithm of monetary monthly household income equalized using OECD scale (see footnote 14 and 15). In-kind income from self-production is not included. All variables are dummy. Definitions of variables presented in section 2.2.

Table C 9 'Subjective' determinants of the satisfaction with household financial situation, logit regression, Romania 2003

	Model3		Model4	
	Sig.	Exp(B)	Sig.	Exp(B)
'Objective' predictors:				
Income	.000	4.057	.000	3.459
Disadvantaged groups	.071	1.440	.304	1.238
Young 18-39 years	.324	.848	.461	.882
Elderly 55 years or more	.029	1.523	.100	1.371
Elementary education (maximum 8 grades)	.485	1.145	.900	1.026
Tertiary education	.038	.696	.364	.848
Residency (1=urban, 0=rural)	.000	2.563	.000	2.126
Little worried to lose job	.022	1.686		
Quite worried to lose job	.085	1.370		
Very worried to lose job	.007	1.770		
Expect economic situation of the country to worsen in the next 3 years	.185	1.338		
Expect household financial situation to worsen in the next 3 years	.000	2.996		
Sharp downward subjective mobility			.000	3.661
Downward subjective mobility			.000	2.761
Upward subjective mobility			.039	.618
Sharp upward subjective mobility			.000	.248
Subjective poor			.000	5.234
Subjective in need			.000	2.552
Believe that inequality has considerable increased since 1995/6			.024	1.449
Constant	.000	.000	.000	.000
Number of cases	*1,793*		*1,746*	
Nagelkerke R Square	*0.26*		*0.31*	

Data: POB FDS 2003. Dependent Variable: Satisfaction with household financial situation (1=satisfied, 0=dissatisfied).

Notes: *Income* – natural logarithm of monetary monthly household income equalized using OECD scale (see footnote 15). In-kind income from self-production is not included. *Disadvantaged groups* – include groups with marginal positions on the labour market and 'living on subsidies' (see section 2.2). Excepting income all variables are dummy. *Concern of loosing job* defined as in Table A7 (Annex A) and split in three dummy variables for 'little concerned', 'fairly concerned', and 'very concerned' respectively. *Expectations regarding household financial situation* defined as in Table A6 (Annex A) and collapsed in two categories (1= situation will be "worse" or "much worse"); *Expectations regarding country economic situation* defined as in Table A5 (Annex A) and collapsed in two categories (1= situation will be "worse" or "much worse"). *Perceived dynamic of inequality* defined as in Table A9 (Annex A) and collapsed in two categories 1 = inequality in 2003 is "much higher" or "higher" compared to 1995-96. Definitions of variables subjective mobility and self-definition as poor/ in need presented in section 2.2.

Annex D: Slovenian Surveys

	Income				Entire Sample
	Very insufficient	Insufficient	Sufficient	Amply sufficient	
1988 Household Expenditure Survey Data (3250 observations)					
Household income	132.22	157.88	207.94	306.94	194.99
Age of head of household	50.2	49.1	49.1	47.8	49.1
Family size	2.67	2.39	2.51	2.50	2.46
Share of homeowners	53.6%	59.4%	66.1%	74.0%	63.8%
Share of unemployed members per household	1.8%	1.1%	0.5%	0.8%	0.8%
Number of households	321	751	1978	200	3250
Share of households	9.9%	23.1%	60.9%	6.2%	100.0%
1993 Household Expenditure Survey Data (3270 observations)					
Household income	113.08	143.19	187.70	294.57	178.82
Age of head of household	48.5	49.8	49.6	49.8	49.6
Family size	2.32	2.52	2.56	2.54	2.53
Share of homeowners	72.0%	86.7%	90.9%	94.7%	88.6%
Share of unemployed members per household	15.0%	7.3%	3.6%	1.1%	5.3%
Number of households	261	849	1896	264	3270
Share of households	8.0%	26.0%	58.0%	8.1%	100.0%

	Making ends meet					Entire Sample
	With great difficulty	With difficulty	With some difficulty	Without difficulty	With ease	
1997–1999 Household Expenditure Survey Data (3867 observations)						
Household income	132.00	168.39	214.53	259.24	312.47	207.16
Age of head of household	49.4	49.6	49.1	50.9	52.3	49.7
Family size	2.46	2.52	2.51	2.36	2.25	2.47
Share of homeowners	77.3%	84.1%	87.4%	88.8%	92.6%	86.0%
Share of unemployed members per household	18.7%	9.9%	4.7%	1.7%	0.8%	7.4%
Number of households	449	973	1631	502	312	3867
Share of households	11.6%	25.2%	42.2%	13.0%	8.1%	100.0%

Note: Income refers to monthly disposable income in thousands of Slovenian tolars, calculated in fixed 1998 prices using the CPI. Family size is measured as number of equivalent adults according to the standard OECD equivalence scale.

II. LIFE SATISFACTION, INCOME DISTRIBUTION AND INCOME MOBILITY

II.1 Life satisfaction and income mobility: A case study for Hungary

Modelling satisfaction in Section I – for a better comparison – we basically used only such variables which are available in the Romanian dataset. This is why we did not utilize there the panel character of the Hungarian data, whereas income mobility is a basic determinant of satisfaction. In this section, using different measures of relative income mobility, we complete the group of our explanatory variables used in Section I.

When we think about the link between mobility and satisfaction, and we try to estimate the size of the effect of relative income position changes on satisfaction, we can imagine three basic cases. The first one and the most unlikely is that the mobility has no significant effect on satisfaction. The second possibility well-known in the literature is that positive changes in income flows have additional positive effect on subjective well-being (see e.g. Senik (2005), Fong (2005), Boeri and Brandolini (2005) among the latest publications). Respondents with upward mobility give positive assessments of their past economic progress, they may also have confidence in future economic processes, and that is the cause why they are more satisfied than the respondents on the same income level with stagnating relative income position.

The third possibility is that volatility in income flows may have negative effects on satisfaction. Respondents with upward mobility may give less positive assessments of their past economic progress than respondents having the same income for a longer while. Even their households that saw their real income to rise failed to perceive that they benefited over time, they are scared about future and have great fear of future economic progresses, and that is why they are less satisfied than the respondents on the same income level with stagnating relative income position. We have to calculate with this possibility in the case of great uncertainty, namely, in the case of competitive pressure situation, when the respondents with increasing income are pessimistic about their future income trends. (See Ravallion and Lokshin (2000), Graham and Pettinato (2001, 2002a,b).) Looking this phenomenon from the other side, the satisfaction of respondents with downward mobility is decreasing, but their satisfaction level remains higher those who have already been on this lower income level for a longer while.

In the following we argue that between 2000 and 2002, the third case is valid for Hungary. However, we have to underline, that our data-set is limited, and we are not able to analyse long-term processes, and we know nothing about the dynamics of satisfaction of respondents when the upward (or downward) mobility process is persistent.

To generate relative income mobility measures we order the people in the sample according to their equalised income, and normalise the sequence between 0 and 100 per cent. We name this parameter the *relative income position* of the persons, what is a simple generalisation of the

decile or percentile structure. The difference of relative income positions between two time periods – usually years – can be used for measuring relative mobility. Taking this measure as a starting point we can introduce further mobility variables. We can classify the differences into categories according to the extent of downward and upward changes of the relative income positions at 10 and 20 per cent level. For example, we regard a person mobile at the 10 per cent range, if his/her relative income position difference is ten per cent at least. In the simplest case we disregard the extent of the changes and consider only their direction.

Applying the 10 and 20 per cent range mobility measure we have shown already that the relative mobility was decreasing in Hungary between 1993 and 2001. After the stabilisation and in the period of growth the mobility gets lower, and the relative position of majority of people is getting more and more frozen. Between 2000 and 2002 the income and expenditure mobility were slightly increasing. (See Subchapter 5.2 in Deliverable 14 titled "Impact of Transition and Pre-accession on Income Distribution and Inequality in Selected EU Catching-up and Candidate Countries".)

The two columns of Table 1 contain the material and general satisfaction models using only objective variables as explanatory variables. Most of this variables correspond to the variables of the first columns in Table B8, and Table B9 (Annex B) respectively, and the detailed description of these variables can be found in Section I. Naturally, introducing mobility variables changes the coefficients and standard errors of our variables, albeit not very strongly, we do not see substantial modification in them. Using mobility variables improves significantly our estimations, displacing some of our previous objective variables, and making possible to introduce some new variables. In the following we describe only the essential differences between this table and Table B8, and B9 respectively.

Table 1: Material and general satisfaction in 2002, Hungary Ordered logit estimates with objective variables (N=3398)

	(1) material satisfaction	(2) general satisfaction
2nd + 3rd quintiles of equalised income in 2002	0.90 (0.18)**	0.55 (0.16)**
4th quintile	0.97 (0.21)**	0.67 (0.19)**
9th decile	1.29 (0.26)**	0.71 (0.23)**
Lower 5 percentiles of 10th decile	1.95 (0.28)**	1.40 (0.29)**
Upper 5 percentiles of 10th decile	2.22 (0.37)**	1.85 (0.33)**
Casual workers	-1.06 (0.31)**	-1.87 (0.27)**
Unemployed	-0.91 (0.22)**	-0.95 (0.22)**
Disability pensioners	-0.58 (0.17)**	
Living on subsidies	-1.47 (0.42)**	-1.18 (0.40)**
Adult household members of marginal activity groups	-0.55 (0.17)**	-0.52 (0.14)**
Household contains child(ren) under age 4	-0.67 (0.22)**	
Household contains permanently sick person		-0.29 (0.12) *
Student		0.84 (0.23)**
Young (18-39 ages)	0.58 (0.12)**	0.61 (0.13)**
Elderly (55-X ages)	0.45 (0.12)**	0.49 (0.12)**
Graduated	0.39 (0.15)**	0.66 (0.15)**
Passenger car	0.38 (0.11)**	0.45 (0.11)**
Flat's/house's value between median and 90th percentile	0.25 (0.10) *	
Household has debts	-0.55 (0.21) *	
Rel. inc. pos.: up & in the lower 5 deciles in 2000[a]	**-0.28 (0.12) ***	**-0.32 (0.12)****
Rel. inc. pos. of 2002 minus rel. inc. pos. of 2001 (cont.)	**-0.87 (0.32)****	**-0.67 (0.34) ***
Log pseudolikelihood at step 0	-4803.8	-4764.7
Log pseudolikelihood at last step	-4388.7	-4390.5
Pseudo R^2	0.086	0.079

Notes: Robust standard errors adjusted for clustering on households in parentheses.

* significant at 5% level, ** significant at 1% level.

Dependent variable of model (1): *To what extent are you satisfied or dissatisfied with the material situation of your household?* Dependent variable of model (2): *All things considered to what extent are you satisfied or dissatisfied with your life in general?* Possible answers: very dissatisfied (1), fairly dissatisfied (2), neither satisfied or dissatisfied (3), fairly satisfied (4), very satisfied (5).

[a] Relative income position increased from 2000 to 2001 and in 2000 the household was in the lower 5 equalised income deciles (dummy).

In our previous study[23] we have already shown that the relative position of families with younger children got permanently worse between 1993 and 2002. They are ambiguously the losers of transition. Their positions did not improve even in the period of growth. Quite understandably, families with children aged not older than 3 years are less satisfied with their material situation than the others. Presumably, this negative effect is compensated by the pleasure of taking care of the little ones; therefore, in the case of general satisfaction this variable is significant only at 10 per cent level.

Beside flow type variables we also use asset variables as a good proxy for wealth. We used passenger car and flat/house property for this purpose. The effect of the flat property is not unambiguous. It was found that both people who own flat with relatively small reported value and people who have explicitly expensive flat are relatively less satisfied with their material situation than the others. The lower threshold of the flat values is about at the median, and the upper one is at about 90 percentile. We applied dummy variable of the group of people who have flat with value in this given interval. According to this proxy, the wealthiest people are relatively less satisfied with their material situation. People who have bank credit for purchasing flat, passenger car or other expensive goods are less satisfied than the others.

Most important part of our modelling is the analysis of the effect of mobility. The negative sign of mobility variables in bold in Table 1 indicates that here – ceteris paribus – the third case of the above mentioned three basic possibilities concerning relationship between mobility and satisfaction is valid.

For measuring mobility we use two variables in Table 1. The first one is the difference of relative income positions in 2002 and in 2001. The second variable is the dummy of persons with upward relative income mobility between 2000 and 2001, with a restriction, that this variable identifies only respondents with equalised household income under the median in 2000. We get similar result (with a little bit smaller pseudo R^2) if we use only one continuous variable instead of these two variables, namely, the relative income position in 2002 minus the average of the relative income positions in 2000 and in 2001.

Naturally, our result shown in Table 1 does not mean that the upward mobility would reduce satisfaction. If we use income categories (the variables in the first five rows of Table 1) for 2001 instead of income categories for 2002, and we do not change the other variables, the sign of the coefficient of the difference of relative income positions in 2002 and 2001 (that is the second mobility variable) is changing to the opposite sign. Now it is a positive number with similar value to the former one, and the coefficients of all other variables hold their original signs and orders of magnitude.

Analogously, we get similar result if we use the income categories of 2000, and we put the difference of relative income positions in 2001 and in 2000 into the model, as well as the difference of relative income positions in 2002 and in 2001 respectively. In these two cases the sign of both mobility variables are positive.

From these results it ambiguously follows that *upward mobility increases satisfaction, but people on a certain income level who reached this level just now are less satisfied than those who have already been on this level for a long while.*

This argument can be supported also by two simple cross-tables. Table 2 shows the average material satisfaction in 2002 by the direction of relative income mobility between 2001 and 2002 according to the deciles of equalised household income in 2001, and in 2002,

[23] Deliverable 14, "Impact of transition and pre-accession on income distribution and inequality in selected EU catching-up and candidate countries".

respectively. As appropriate, the total rows of the two subtables are identical. We can see in both tables – with unimportant exceptions – that the values of satisfaction are monotonously increasing in all columns. In the first table, making comparison by income deciles of 2001, we can see in all rows that the upward mobile persons are more satisfied than the downward mobile persons with the same income in 2001. Making comparison by income deciles of 2002, we can see without exception in each row that the average satisfaction of upward mobile persons is less than the average satisfaction of downward mobiles. (Naturally, in the case of total population we get different result, as the average income of upward mobile people is significantly higher in 2002, than in 2001.)

Table 2: Average material satisfaction in 2002 distributed by deciles of equalised household income and by the direction of relative income mobility between 2001 and 2002

	Average satisfaction	
Income deciles in 2001	Downward mobiles	Upward mobiles
1	1.68	1.85
2	1.90	2.20
3	2.11	2.43
4	2.13	2.41
5	2.37	2.56
6	2.36	2.52
7	2.64	2.59
8	2.69	2.84
9	2.77	3.09
10	3.06	3.43
Total	2.48	2.54

	Average satisfaction	
Income deciles in 2002	Downward mobiles	Upward mobiles
1	1.84	1.57
2	2.00	1.79
3	2.33	2.19
4	2.44	2.42
5	2.65	2.37
6	2.65	2.56
7	2.63	2.47
8	2.70	2.66
9	3.07	2.65
10	3.49	3.12
Total	2.48	2.54

For making preparation of our further analysis we create one more scenario. In this case we use dummy variable of upward mobile person in the model, instead of difference of relative income mobility positions in 2002 and in 2001. This variable is also significant, and its coefficient is also negative, but the explanatory power of the model is a little bit smaller than in the case shown in Table 1.

We assumed that the relatively smaller satisfaction of upward mobile people in the short term may come from the competitive pressure situation, and this situation can be associated with uncertainty and discontent. These people feel their position uncertain and unstable, and assume trends to turn back to the opposite direction in the future. According to this assumption we divided the group of upward mobile persons into two subgroups by activity. We ranked people working in competitive sector of the economy into the first group, the group of entrepreneurs and employees in firms not owned by the state. The rest of people are

put into the other group, the group of others. Dummy variable of the first group is significant with negative sign, but dummy variable of the second group is not significant. Using dummy variable of people working in the competitive sector the explanatory power of our model is also increasing. Taking into account the family members of people working in the competitive sector we can improve further the value of pseudo R^2.

We assumed that the relatively smaller satisfaction of upward mobile people compared with satisfaction of others on the same income level originated from uncertainty. *We find evidence for verification of our hypothesis: relatively smaller satisfaction of the upward mobile people is prevalent in the competitive sector.* The same hypothesis is supported by the fact that in the case of people employed by the state we can not find the same significant effect.

Table 3: Material and general satisfaction in 2002, Hungary
Ordered logit estimates with objective and subjective variables (N=3398)

	(1) material satisfaction	(2) general satisfaction
2nd + 3rd quintiles of equalised income in 2002	0.53 (0.17)**	
4th quintile	0.56 (0.20)**	
9th decile	0.75 (0.25)**	
Lower 5 percentiles of 10th decile	1.28 (0.26)**	
Upper 5 percentiles of 10th decile	1.15 (0.37)**	
Ln(equalised house hold income in 2002)		0.55 (0.17)**
Marginal activity groups together [a]	-0.55 (0.17)**	-0.52 (0.14)**
Household contains permanently sick person		-0.25 (0.12) *
Student		0.63 (0.23)**
Elderly (55-X ages)	0.54 (0.11)**	0.37 (0.11)**
Graduated		0.32 (0.14) *
Household has debts	-0.41 (0.19) *	
Relative inc. mobility between 2000 and 2002 (cont) [b]	-0.80 (0.32) *	-0.84 (0.34) *
Subjective position in 2002: level 1 (from 8)	-5.01 (0.51)**	-3.71 (0.47)**
Subjective position in 2002: level 2	-4.16 (0.44)**	-3.41 (0.37)**
Subjective position in 2002: level 3	-3.18 (0.40)**	-2.64 (0.33)**
Subjective position in 2002: level 4	-2.49 (0.38)**	-2.16 (0.32)**
Subjective position in 2002: level 5	-1.72 (0.38)**	-1.38 (0.32)**
Subjective position in 2002: level 6	-1.38 (0.38)**	-0.89 (0.34)**
Subjective mobility: no change in material situation	0.64 (0.12)**	0.50 (0.11)**
Subjective mobility: slightly improved mat. sit.	0.81 (0.18)**	0.72 (0.17)**
Subjective mobility: considerably improved mat. sit.	2.35 (0.99) *	
Essentially agree with restricting income of the rich	-0.22 (0.10) *	-0.22 (0.10) *
Opinion: no chance for the hh to obtain better mat. sit.	-0.36 (0.11)**	-0.59 (0.11)**

Expectations on children's future: much worse	-1.30 (0.43)**	-1.18 (0.31)**
Absolutely uncertain to find another job [c]	-0.45 (0.12)**	-0.37 (0.11)**
Effect of EU on the chance of employees: positive	0.35 (0.10)**	0.46 (0.11)**
Log pseudolikelihood at step 0	-4803.8	-4764.7
Log pseudolikelihood at last step	-3937.5	-4032.3
Pseudo R^2	0.180	0.154

Notes: Robust standard errors adjusted for clustering on households in parentheses.

* significant at 5% level, ** significant at 1% level.

Dependent variable of model (1): *To what extent are you satisfied or dissatisfied with the material situation of your household?* Dependent variable of model (2): *All things considered to what extent are you satisfied or dissatisfied with your life in general?* Possible answers: very dissatisfied (1), fairly dissatisfied (2), neither satisfied or dissatisfied (3), fairly satisfied (4), very satisfied (5).

[a] Marginal activity groups: casual workers, unemployed, disability pensioners, people living on subsidies.

[b] Relative income position in 2002 minus the average of the relative income positions in 2001 and 2002.

[c] This dummy variable signs that he answer to the question *Imagine the situation that tomorrow you lose your job! How certain are you that you will be able to find another job not worse than the present one?* was "absolutely uncertain" (see Table A8 in Annex A).

Introducing subjective variables improves significantly our estimations. Models in Table 3 are variants of the third models of Table B8 and B9 considering mobility, the two columns of Table 3 contain the two satisfaction models. Again, we describe mainly the differences between this table and the third columns of Table B8 and B9 (models without mobility).

In these models the relative income mobility is measured by the difference of the relative income position in 2002 and the average of the relative income positions in 2000 and 2001. *The effect of objective relative income mobility is the same what we found in the case of models without subjective variables*.

In the case of models with subjective variables and without mobility we got the best estimation parameters when we took into consideration the subjective wealth positions in *2000* and the change of subjective positions between 2000 and 2002 (see Tables B8 and B9). Introducing mobility the variables of the change of subjective income positions became insignificant, and we get the best estimation when we use variable of subjective positions in *2002* as explanatory variable. Respondents were asked to place their household to 9 steps on the poor-rich scale of the income/wealth ladder, but nobody choose the ninth step. We draw together the groups of respondents choosing the seventh and eighth step, and they are the reference group in the model.

It still holds true that individuals thinking themselves wealthier look more satisfied. Despite of introducing subjective variables, the variables of current income are still significant, albeit their effect on satisfaction is smaller than the effect of subjective ranking variables. People having larger income are more satisfied. However, introduction of subjective variables terminated the case when the difference between satisfaction with material situation of the higher income categories was bigger than the difference in satisfaction of the lower income categories.

Above a certain income the level of satisfaction is decreasing, or, at least, stagnating. On these income levels *the subjective valuation of the current income position of households is the dominant variable* in both of our models. Two theories for explaining these findings are:

adaptations and relative position concerns (see Easterlin (2003), Frey and Stutzer (2004, Di Tella at al. (2004)). This growth-without-happiness paradox has been introduced several times in other countries and other periods of time by different types of studies and different types of researchers (e.g. Blanchflower and Oswald (2004), Diener and Diener (2002), Veenhowen (1993)). Empirical evidence on the strong effect of relative position using well-being data is presented in Clark and Oswald (1996), Blanchflower and Oswald (2004), and Ferrer-i-Carbonell (2005).

For the sake of correct interpretation it is important to underline the basic difference between the two types – objective and subjective – of our variables. The factual income level is a flow type variable, while during the subjective valuation of the current material situation of the household an asset position, namely, the wealth position of the household is estimated.

In analysing the effect of income mobility on satisfaction *subjective* income mobility is especially important. In our supplementary interview we have the following question: "How has the financial situation of your family changed during the last three years?" Respondents had five choices: considerable declined, slightly declined, did not change, slightly improved and considerable improved. We call this variable subjective mobility.

In contrasting with objective mobility, we experience that coefficients of subjective mobility are increasing along its categories, that is *the more people value their subjective mobility positive, the more are they satisfied with both their financial situation, and their life in general. That is the feeling of upward mobility – in contrast to objective mobility – really gives an additional surplus to satisfaction.* The difference between objective and subjective mobility shows that a significant part of people with increasing relative income position do not perceive this growth, and the majority of respondents underestimate the real size of changes in their material situation.

The gap between the objective value and the subjective assessment of mobility of the upwardly mobile households may be resulted by uncertainty in competitive pressure situation mentioned above. Another possibility is that the preference groups what people choose and aspire to be in, are also playing a very important role in satisfaction formation. The influence of these subjectively chosen reference groups may also lead to the underestimation of the real size of changes in financial positions. (In the frame of our present investigation we can not verify this hypothesis concerning reference groups.)

For illustration of the gap between the objective value and the subjective assessment of mobility we show the distribution of subjective and relative mobility in 2002 (see Table 4). In constructing of relative mobility categories we choose categories (-20; -10; 10; 20 per cent) because these categories can be easily compared with categories of subjective mobility, and in this case the rank correlation between objective and subjective mobility categories is the highest. We can see that only 28 per cent of respondents are in the same category in both distributions, 26 per cent are in the lower and 46 per cent are in the upper triangle of the table. Naturally, the cause of deviation may be that we describe and take into account the real processes in an inaccurate way. However, the great size of asymmetry shows that the majority of people do not perceive their upward income mobility. We just mention now that subjective mobility is much closer to relative mobility than to absolute one, the asymmetry between subjective and absolute mobility – that is the increasing in real income – is much bigger than between subjective and relative mobility.

Table 4: Distribution of subjective and relative income mobility in 2002

number of observations = 100%

II.	Relative mobility					
III. SUBJECTIVE MOBILITY	< -20%	-20< <-10	-10< <10	10< <20	20% <	Total
Considerably declined	**1**	3	7	1	1	14
Slightly declined	3	**4**	14	3	3	27
Did not change	6	5	**21**	6	5	42
Slightly improved	1	2	8	**2**	3	16
Considerably improved	0	0	1	0	**0**	1
IV. TOTAL	12	14	50	12	13	100

Note: Relative mobility is measured by the difference of relative income position in 2002 and the average of relative income positions in 2000 and 2001. *< -20%* means that this difference is less than -20, on a 100 degree scale, -20< <-10 means that it is between -20 and -10%, etc.

Besides the variables of subjective ranking of relative income position and subjective mobility we have numerous other subjective variables having strong relationship with satisfaction. In the case of these other subjective variables the share of "does not know" responses is very high. We did not leave out these respondents from the panel population because the number of observation would become non-acceptably low. We identify and collect these answers in separate categories. (In the following chapter of our study when we analyse the demand for redistribution the respondents with "does not know" responses play an important role on modelling, but they do not have the same effect on satisfaction.)

45 per cent of respondents essentially agreed with the statement that *the government should restrict the income of the rich. They are less satisfied than the others.* We can say that there is a link between the antipathy toward rich and the relative discontent. (In Chapter 4 we return back to this problem.) In our previous model which does not contain relative income mobility (see Chapter 2.1) we could also link perception of inequality and satisfaction. Here, the variable of perception of inequality is not significant, what means that perception of mobility and perception of changes in inequality have a very strong relationship.

Variables having strong impact on satisfaction are connected to the future prospects of respondents and to the valuation of labour market situation. The possible answers to the question "*Do you see any chance for your household to obtain a better financial position"* were: no chance, work prospects, health status prospects, children's future prospects, or other prospects (see Table B2 in Annex B). Those people – 30 per cent of the population – who do not see any chance for their household to obtain a better financial position – ceteris paribus – are much more dissatisfied with both their financial situation and their life in general than the others. Those people who think that their children will live much worse compared with them in the future are also much more dissatisfied than the others.

40 per cent of employees answered "absolutely uncertain" to the question "How certain are you that you will be able to find another job not worse than the present one?". These people are more dissatisfied than the others. We can see that people's tolerance of uncertainty and

income risk are mainly determined by the assumed cost of loosing job and the extent of their concern about it.

The question "What kind of effect will have Hungary's joining the EU on the chances of the Hungarian employees?" (see Table B3) is also connected with the future prospects of labour market positions. People who expect negative or no effect are rather dissatisfied than those who expect positive effect.

We have seen that people belonging to 'marginal activity groups', living on the border of activity and inactivity (casual workers, unemployed, disability pensioners, people living on subsidies) – independently of the income level of their household – are more dissatisfied with their position than the others. From the previous results it follows that *this relative dissatisfaction comprises also those who are not on the outskirt of activity, but feel their position uncertain on the labour market and are afraid of the labour market consequences of the competitive pressure*.

We can see that besides factual and perceived financial situation, and past mobility processes the future prospects of the people play also very important role in satisfaction formation. Expectations about future prospects for growth and mobility affect both material satisfaction and life satisfaction in general. From our findings we may draw important lessons related to some steps of the Hungarian governments in 2001 and 2002. Between 2000 and 2002 the real income of households increased by 20 per cent. This dynamic growth can be explained mainly by political and not economic reasons. In 2001, before the parliamentary elections in May 2002, the vacating government created a pre-election budget with considerable extra household income outflow. After this, the new government – keeping its election promises – continued this kind of redistributive policy.

As we have seen, income growth within uncertain circumstances generates relatively smaller rise in satisfaction. If this uncertainty expands also to the future and many are thinking that they can not expect further improvements, then after a while this may cause also the decrease of satisfaction. We can hypothesize that such kind of state measures which raise the income of the population in relatively smaller extent, but steadily and preserving also the future possibilities may cause larger increase in the satisfaction than unusual and one-time income increases.

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II.2 The Demand for Redistribution in Hungary

Little is known in Hungary about the way the people perceive the existing distribution of economic resources and related policies. In the West-European countries, the results of some interesting papers relying on the European Social Survey (e.g. see Rehm (2005)) show that skill specificity and occupational unemployment are important determinants of individual preferences over redistribution, whereas structural change and exposure to international competition not. Estimating determinants of preferences for redistribution in Hungary we use our supplementary interview for 2002 and the Hungarian Household Rotation Panel data set for years 2000-2002. *We argue that demand for redistribution of households in Hungary is strongly depending on the determinants of competitive pressure situation investigated in our previous studies.*

Preferences for redistribution differ significantly across countries. In Alesina and Fuchs-Schundeln (2005) the feedback process of the economic regime on individual preferences was investigated comparing East and West Germans preferences. East Germans who got used to the extensive redistribution and heavy state intervention are more in favour of redistribution than West Germans, even after controlling for economic incentives. This effect is especially strong for older cohorts, who lived under Communism for a longer time period.

We may think that the poor and the older generation of Hungary unanimously favour income redistribution policies, and the rich – the winners of transition – and the younger generation oppose it. However, this view is too simple. People's preferences for greater income distribution vary with their current household income and expenditure, their future income expectations, their social status and economic positions, and dynamics of these variables.

Clark at al. (2004) strongly rejects the hypothesis that individuals transform income into well-being in the same way. Analogously, we reject the hypothesis that people's attitude toward redistribution depends on income or age. People perceive economic and social inequality and mobility processes in different ways, and their demand for redistribution is strongly depend on this perception. Investigating the determinants of preferences for income redistribution we have the similar basic hypothesis to Rehm (2005) who argues that there are two basic sources of preference formation after controlling income and age: people are either in favour of income redistribution because they are feel being *disadvantaged*, or they favour redistribution as a means to avoid risk and *insure against income shocks*.

Although disapproval of redistribution increases with income, there is a sizeable percentage of people in the highest income deciles who also approve redistribution policies, and respondents in the lower income groups do not necessarily support greater distribution. Furthermore, the impact of mobility on attitudes towards redistribution is affected by individual perceptions of the "up and down" processes, and deeply depended on the extent and the dynamics of income and social mobility. On the other hand, *people who have an everyday experience that the Hungarian society is immobile, and they think that fairness in mobility is questionable nowadays, do not see mobility as an alternative tool for redistribution, and prefer more direct and quick distributive policies.* Furthermore, support for redistribution policies is negatively affected by expected future income what may separate the winners of transition. (See Ravallion and Lokshin (2000) and Alesina and La Ferrara (2001).)

According to the POUM (Prospect of upward mobility) hypothesis of Benabou and Ok (2001) the currently poor individuals may oppose redistribution because they hope to become rich in the future. And as a counterpoint, the rich may not necessarily oppose redistribution if they expect their income and wealth to fall in the future. This effect may be and should be much stronger in case of transition.

We show that income is negatively correlated with support for redistribution in Hungary, but there are other, much more important factors, like uncertainty, risk of income, unemployment, and household circumstances which are strongly affecting and also determining the demand for redistribution. After controlling for income, risk averse individuals, and those who expect to be unemployed in the future show a tendency to support greater distribution. Even the relatively rich elderly who have few prospects of upward mobility strongly support greater redistribution, whereas younger and relatively poorer people have less demand for such a policy.

Descriptive statistics

In our supplementary interview we have two questions concerning redistribution (see Tables A10 and A11 in Annex A for raw distribution):

1. Do you agree that the government should restrict the income of the rich?
2. Do you agree that the government should allocate more income to the poor?

In both cases the respondents had four choices (values in brackets): essentially disagree (1), more disagree than agree (2), more agree than disagree (2), essentially agree (4). The crosstabulation of the valid answers can be seen in Table R1. In the further analysis we sometimes draw together these four categories into two ones and we summarise only the people who agree or disagree on these questions.

Table R1. Distribution of the answers to the redistribution questions (N=3186)

	Allocate more income to the poor				
Restrict the income of the rich	Essentially disagree	More disagree than agree	More agree than disagree	Essentially agree	Total
Essentially disagree	2	1	1	3	6
More disagree than agree	1	3	6	4	14
More agree than disagree	1	3	16	11	31
Essentially agree	1	1	6	42	50
Total	4	7	29	60	100
	Disagree		Agree		
Disagree	6		14		20
Agree	4		76		80
Total	10		90		100

Thinking about the possible answers of the respondents we have to make it clear that the first question is not strictly a "redistribution" question, and broad enough to cover both type of redistribution for equity, and the type of redistribution for the poor. Furthermore, this question does not remind respondents that reduction of differences in income levels results higher taxes. This mixed information can provide more than one stimulus, and may generate different effects in the different segments of the population. (See the same problem in Rehm (2005), p.7.) Agreeing to restrict the income of the rich does not mean to redistribute their income in the same time, and does not even mean to redistribute their income to the poor. (Later on we return back to this problem.)

Calculating only the valid responses of both questions, more than three-quarters (76 per cent) of the respondents agreed in both cases (see the second part of Table R1). These people can be considered as – more or less – believers of redistribution.

More than 6 per cent of the respondents disagreed in both cases, we can consider them opponents of redistribution. Comparing our data with data of West-European countries in the European Social Survey, we found it quite interesting that – after seventeen years of living in western type democracy – the share of redistribution believers in Hungary is surprisingly high, and the share of people who are strongly opponents of redistribution is quite low. (See Rehm (2005).)

14 per cent of respondents agreed that the government should allocate more income to the poor, while the same people disagreed that the government should restrict the income of the rich. We assume that these people would like to increase the income of the poor with other tools or economic implements, or they just don't think that a more progressive taxation can also be interpreted as the restriction of the income of the rich. In case of these people we may also assume that they show solidarity with the poor, or they are poor themselves, but they would like to increase income of the poor with the aid of the whole society, and not at the expense of the rich only. Their support for redistribution may be due to a sense of altruism.

11 per cent of respondents – who agree that the government should allocate more income to the poor but they only more agree than disagree that the government should restrict the income of the rich (see the first part of Table R1) – can be ranked also among these people. The share of these people is independent of income.

The smallest group (4 per cent) is the group of respondents who agree to restrict the income of the rich, but disagree with the redistribution for the poor. One of the explanations of this result is that these people think that the destination of redistribution should be the middle income group, and not the poor. The second explanation could be that the real motivation of this group in limiting income of the rich is the antipathy towards rich and the envy. The general view of the Hungarian and East-European societies adopts the conventional assumption that people who are really mobile in income and wealth have used unfair tools in getting rich during transition.

The fairness concern may be very important determinants of the demand for redistribution in case of other respondents groups, too. (See Fong (2005).) The group of respondents who answer yes to both questions may also have this motivation. 6 per cent of the respondents answering a definite yes to the question of restricting income of the rich, but they are answering yes with a smaller share to the question concerning allocation more income for the poor. The people who are agree government intervention in distributive matters are partly those who believe that the social 'rat race' is not fair , that is, the people do not have the same

opportunities to move up in life, even in the middle or after transition. These individuals feel that the lower the social mobility is, the more the government should redistribute, and social mobility is not a substitute for government intervention.

In the same attitude could be seen in our satisfaction modelling. The variables identifying the respondents who answer yes to the redistribution questions have negative and significant coefficients in our two satisfaction models (see Chapter 2.1). The more the people agree that the government should restrict the income of the rich, the more likely that these people are dissatisfied with their life and their material situation. Same correlation between the variable of second redistribution question and satisfaction variable does not exist.

We try to link perception of inequality and demand for redistribution. In case of both redistribution questions we found positive and significant relationships: the more the people think that income and wealth differences are increasing, the more likely that these people are believers of redistribution. The correlation is stronger in case of "restrict income of the rich", than in case of "allocate more income for the poor". (The value of Cramer's rank correlation is 0.17, and 0.11 respectively.) *The different behaviour of the two redistribution variables leads us to modelling separately the two redistribution variables.*

We can hypothesise with high certainty that expenditure and labour market status will have significant impact on demand for redistribution. Similarly, health, housing conditions, family structure, family events, and social life are also expected to correlate with demand for redistribution. We would like to focus on mainly the impact of competitive pressure, but using the referenced literature we made a list of basic and possible determinants of demand for redistribution. (See Ohtake and Tomioka (2004).) All variables listed below are accurately tested in our empirical analysis. Most of our variables are corresponding to these variables, but some of them are surprisingly discordant.

Basic variables of preferences for redistribution in the literature

(1) *Current income and expenditure.* It is well-known from our previous research that a certain part of the total household expenditure is continuously covered by non-reported/unofficial income, that is, a certain part of the total income is not reported in the survey. This unofficial share of income appears in the reported expenditure. In fact, very few longitudinal surveys in developed countries provide detailed information on both households' income and expenditure. Apart from the American Consumer Expenditure Survey for the US, it is mostly countries in transition from planned to a market economy those who hold reliable longitudinal data sets on income and expenditure. (See e.g. the Russian Longitudinal Monitoring Survey.)

(2) Expected income and social mobility. Alesina and La Ferrara (2001) constructed first an index of income mobility for testing the POUM hypothesis. They found a negative correlation between regional mobility and individual support for redistribution. Ravallion and Lokshin (2000) showed that even those who are currently rich tend to support redistribution if they are expecting a decline in their future welfare. In our investigation we do not have expected income variable, it is substituted by the income and mobility variables.

(3) Imperfect knowledge about the objective upward or downward mobility. Alesina and La Ferrara (2001) and Ravallion and Lokshin (2000) found past personal experiences concerned dynamics of mobility very important in the formation of attitude towards income redistribution.

(4) Income inequality. Alesina, di Tella and MacGullock (2001) analysing special subgroups of the population show that a person's subjective well-being may be negatively affected by greater income inequality, because people perceive inequality increasing as the increase of income risk and that is why they support more redistribution to avoid this increasing uncertainty. Ohtake and Tomoika (2004) show that many respondents think that economic inequalities of one kind or another have increased in the past few years, and argue that it could be that people interpret greater inequality as a rise in income risk, and hence desire more redistribution to prepare for this kind of increased uncertainty.

(5) *Risk aversion (self-employment, unemployment, inequality aversion)*. Unfortunately, neither the HHBS, nor our supplementary interview does not contain any question that would allow us to directly measure risk aversion. We use proxies for that purpose. (See Alesina and La Ferrara (2001).) The proxies we consider are: self-employment, unemployment, risk of income (inequality growth aversion, income uncertainty), concern about job loss, and expectation about future financial situation.

(6) Age. Similarly to other findings in the literature, results of Ohtake and Tomioka (2004) implies that the effect of age on support for greater redistribution is positive and larger among those people who are relatively poor and retired elderly, who have no prospect of entering the labour market again, and therefore they have no possibility of experiencing upward mobility.

(7) *Gender*. According to Ohtake and Tomioka (2004), females, especially married ones, favour redistribution less than do males. This finding that women oppose redistribution contrasts with findings in Alesina and La Ferrara (2001) for US, and also contrasts of Ravallion and Lokshin (2000) for Russia. Alesina and La Ferrara argue that women tend to support more redistribution, possibly because they perceive a lack of equal opportunities for all in America.

Results

First the basic objective measures of the two types of redistribution questions were tested. The two columns of Table R2 show the results of the two logistic regressions. Positive sign notes that the given respondent group – comparing with the reference group – supports more redistribution, and negative sign shows the opposite, respectively.

According to our hypothesis, but probably very surprisingly for the reader, the *variable of redistribution for the poor* (second redistribution question) *has no significant relationship with neither income and nor expenditure.* The followers of this type of redistribution can be found in every strata of the population, distributed uniformly. As we mentioned before summing up the two groups of respondents who agreed that the government should allocate more income to the poor, the share of these people is independent of income.

In case of the first redistribution question - identifying respondents who answer yes to *restrict income of the rich - expenditure has negative and significant coefficient. Greater household expenditure is negatively correlated with support for redistribution, wealthier individuals look less favourably to redistribution.* The disapproval of more redistribution is stronger in higher expenditure groups. This is intuitively very reasonable, but surprisingly the same correlation between the first question and the reported income does not exist. As we mentioned already, a certain part of the total household expenditure is continuously covered by non-reported/unofficial income, that is, a certain part of the total income is not reported in the survey. This unofficial share of income appears in the reported expenditure. It may mean that in some cases expenditure is a better proxy for current income than the reported income itself. Furthermore, it appears reasonable to think that the permanent income position is what really affects demand for redistribution. In this context, we may consider that current consumption is a more accurate indicator of the long-term income household position than current income. Households are able to smooth their consumption while current income flows are fluctuating.

Table R2. Models with objective variables (N=3122)

	(1)	(2)
Log of equalised household expenditures	-0.408 (0.160)*	
Highest qualification ≤ elementary school (8 classes)	0.497 (0.134)**	0.610 (0.140)**
Highest qualification: vocational school	0.487 (0.136)**	0.327 (0.134)*
Self-employed	-0.676 (0.256)**	
Employment position: leader, manager	-0.586 (0.194)**	
Living on subsidies	1.638 (0.723)*	
Marginal activity groups together		0.309 (0.148)*
Family contains permanently sick person	0.399 (0.141)**	0.345 (0.164)*
Lives in Budapest		-0.454 (0.210)*
Hh contains child(ren) between age 7-24 years, not under 7	-0.337 (0.129)**	
Relative income position: up-up[a]	0.436 (0.164)**	
Rel. inc. pos.: up-up & in the lower 5 deciles in year 2000[b]		0.725 (0.245)**
Relative income position: down-down[c]	0.323 (0.138)*	0.294 (0.147)*
Expenditures on cultural activities and recreation	$-4.5 * 10^{-6}$ $(1.4 * 10^{-6})$**	$-3.9 * 10^{-6}$ $(1.7 * 10^{-6})$*
Passenger car		-0.303 (0.138)*
Flat's/house's value between median and 90 perc. (dummy)	-0.378 (0.122)**	-0.391 (0.131)**
Household has debts	0.600 (0.256)*	
Log pseudolikelihood at step 0	-3596.93	-3009.70
Log pseudolikelihood at last step	-3363.99	-2844.08
Pseudo R^2	0.0648	0.0550

Notes: Robust standard errors adjusted for clustering on households in parentheses.

* significant at 5% level, ** significant at 1% level.

Dependent variable of model (1): *Do you agree that the government should restrict the income of the rich?* Dependent variable of model (2): *Do you agree that the government should allocate more income to the poor?*

Possible answers: essentially disagree (1), more disagree than agree (2), more agree than disagree (3), essentially agree (4).

[a] Up-up: relative income position of the household increased both from 2000 to 2001, and from 2001 to 2002

[b] Relative income position increased from 2000 to 2001 and from 2001 to 2002, and in 2000 the household was in the lower 5 equalised income deciles.

[c] Down-down: relative income position decreased both from 2000 to 2001, and from 2001 to 2002.

Education has a significant effect. The less the people are educated, the more they support for redistribution. Those with lowest education have the highest demand for redistribution.

People educated only in primary school (maximum 8 classes) prefer redistribution – exclusively for the poor – more than the educated in vocational schools, and the later group has more demand for redistribution than the group of secondary and highly educated does. (We would get an analogous result between people with secondary and high education holding less educated people as reference group.)

With respect to competitive pressure the most important block of variables, the block of activity variables – like in the satisfaction models – is connected to the *labour market participation.* Entrepreneurs and people in managerial/leader positions – independently on their expenditure level – less agree that the government should restrict the income of the rich. However, they have an average view about allocation more income for the poor. These results show that those activity groups whose position has improved in the 1990s and they were called the absolute winners of the competitive pressure situation try to save their previous positions.

People 'living on the outskirts of activity' and on the border of activity and inactivity – unemployed, disability pensioners, casual workers, people living on subsidies – called together as *marginal activity groups report the opposite view*. They strongly prefer redistribution for the poor, but their demand for restriction the income of the rich is similar to average. The absolute losers of the competitive pressure situation do not feel special antipathy towards rich and the government is expected to improve their positions.

As we have already shown bad health is negatively correlated with overall life satisfaction. Similarly here, *where permanently sick persons are in the family we find these people supportive for redistribution in both cases.*

If we examine the effect of settlement type we find significant relationship only in the second model. People living in Budapest tend to be less favourable to allocate more income to the poor than the others. Budapest is a collecting station of the unemployed provincial poor, mostly Gypsies, who escape from the rural area to the capital for better living conditions. People who are irritated by the crowded capital, the grim sight of homeless people and believe that the less well off have not made enough effort to move up despite their society has few impediments to upward mobility of the poor, tend to oppose governmental redistribution programs. (See Fong (2005).)

Analysing the *family structure* of the households, where there are children aged between 7 and 24, and no younger kids in the family, we find adults members of these family *less supportive for restriction income of the rich* than the others. It is very important to note that majority of people (60 per cent) who brought up or bring up kids are very optimistic about the future of their children, and only ten per cent have the opinion that their children comparing with them will be worse or not better off. *According to the POUM hypothesis we found a negative correlation between expected intergenerational mobility and individual support for redistribution.*

We do not find the same effect in the case of families with small children. In our previous studies (see Compress D14) we have already shown that the relative position of the families with younger children is getting permanently worse and worse in Hungary. It may mean that the expectations about future prospects of children do not affect strongly on the demand for redistribution of these people. On the other hand, we have to mention that these people are in more favour of income redistribution for the poor than the average.

One of the most exciting parts of our work is the analysis of the effect of income and social mobility on demand for redistribution. As we defined mobility in Chapter 3 we order the people in the sample according to the equalised income and normalise the sequence between 0

and 100 per cent. We name this parameter the *relative position* of the persons (which is a simple generalisation of the decile, or percentile structure). The changes in relative income positions can be used to measure the relative mobility. As we have shown already the relative mobility was decreasing in Hungary between 1993 and 2001. After the stabilisation and in the period of growth the mobility gets lower, and the relative position of majority of people is getting more and more frozen. Between 2000 and 2002 the income and expenditure mobility were slightly increasing.

The continuous variable of the change in relative income positions between 2000 and 2002 was used also in modelling satisfaction. We use income instead of expenditure for description of short term dynamics of mobility. In modelling redistribution we apply dummy variables stemming from relative mobility. The "up-up" dummy variable indicates that the relative income position of people identified by this variable improved both between 2000 and 2001, and between 2001 and 2002. The "down-down" dummy variable indicates that the relative income position of people identified by this variable deteriorated in both cases. 17 per cent of the population belongs to the "up-up" and 22 per cent to the "down-down" group.

It is not surprising that people belonging to the "down-down" group are more in favour for income redistribution than the average. However, it is very surprising that the "up-up" group also favours redistribution.

People who are upward mobile support redistribution for the poor only if they belong to the lower five income deciles in 2000 (they number to the 60 per cent of the "up-up" group). We do not find the same difference in case of our first redistribution variable, the restriction of income of the rich. It means that upward mobile people belonging to the higher income part of the society do not favour supporting the poor, however, they favour restriction of income of the rich. We can explain this phenomenon as an antipathy against rich of the ambitious middle class, and as an opinion that the government should help the middle class instead of poor. Comparing these results with the results analysed previously at the activity variables, it seems that the ambitious middle class is more frustrated by the rich than the losers of the competitive pressure situation.

Comparing the different *mobility* categories, *the upward mobile people belonging to the lower five income deciles in the starting year favour redistribution for the poor in greater extent than the others.* Analysing the composition of the "up-up" group by profession, the share of the civil servants, the public health workers, and their family members are higher than the average in this group. As we mentioned before the growth of household incomes started only after 1997, and the real income just almost reached its 1993 level in 2001. We have to keep in mind that the real income in 2001 was only the same as in 1993. Between 2000 and 2002 the income growth rate was extremely fast and abnormal, connected to the wage increases in the pre-election year in 2001, and the huge wage increases of the civil servants and public health workers in 2002, after the election. In 2001, before the parliamentary elections in May 2002, the vacating government created a pre-election budget with considerable extra household income outflow. The new government – keeping its election promises – increased the wages of public servants by 50 per cent and made a considerable supplementary pension paying-off. Even the incomes of these groups are mobile in the investigated year, they feel a large and consistent gap between objective trends and the subjective assessment of their mobility. Despite the fact that individuals in Hungary have surprisingly perfect knowledge about the objective probability of upward or downward mobility, but the past personal experience and the expectation for the future income have very strong effect on formation about income redistribution. Even those who are currently mobile in income tend to support redistribution if they are expecting a decline in their future income and welfare.

Expenditure on culture, entertainment and vacation (including expenditure on related durable goods) is negatively correlated with support of redistribution. Those people who have the highest absolute expenditure on recreation in a broad sense can fight effectively against the negative impact of competitive pressure. People who are on the other end of the scale have no expenditure on culture, entertainment, and recreation at all favour much more redistribution than the others.

Beside flow type variables we also try to use asset variables in our models. As a good proxy for wealth we used passenger car and flat property of the households. *Wealthier individuals look less favourably to redistribution.* People who have passenger car support redistribution less than the others. However, effect of the flat property is not unambiguous. It was found that both people who own flat with relatively small reported value and people who have explicitly expensive flat favour redistribution, and they much rather favour it than the others. The lower threshold of the flat values is about at the median, the upper one is at about 90 percentile. We can see dummy variable of the group of people who have flat with value in this given interval. These people who have flats with middle value are more averse to redistribution than the rest. People who have bank credit for purchasing flat or passenger car are more favourably to restrict the income of the rich.

The estimated coefficient on our *gender* dummy is small and statistically not significant.

Under the POUM hypothesis discussed above, older people should be more supportive of redistribution than younger people are. Furthermore, older people with low income should be for redistribution because they enjoy a net current income gain from redistribution. Surprisingly, *age do not significantly affect the preferences for redistribution* and do not have direct influence. On the other hand, the variables (e.g. presence of children, family structure, flat value, recreation expenditures) depending on age have significant and strong relationship with demand for redistribution.

Now, we focus on the basic objective and subjective measures of the two types of redistribution together. The two columns of Table R3 show the results of the two logistic regressions using both objective, and subjective variables.

We can categorize our subjective variables in two ways. According to the first approach we can differentiate our subjective variables as they refer to the past, the present, or the future. Using another approach we can categorize our variables whether they relate to processes of outside world which are independent of the respondent, or they relates the judgement of her/his own situation.

Mainly in the case of questions related to the future, and to the outside world the share of "does not know" responses is very high. The large-sized non-response problem – not independent of satisfaction and demand for redistribution – creates difficulties during our analysis. If we left out these respondents from the panel population the number of observation would be non-acceptably low and we would distort the results. That is why we identify and collect together these responses in separate categories.

Introducing subjective variables improves significantly our estimations. These subjective variables displace some of our previous objective variables: log of equalised household expenditure, people living on subsidies, Budapest dummy, families having permanently sick person, respondents owning passenger car, dept owners, and variable of household structure (i.e. households having children between age 7-24, but no younger children).

The other objective variables kept their significancy and they play similar role in this model than in the previous one. These objective variables are: qualification, employment status (self-employed and leader/manager status in Model 1 and marginal activity groups in Model 2), mobility variables ("up-up", "down-down"), expenditure on cultural activities, and value of flat/house.

One of the most important variables related to past and subjectively perceived processes is the variable of the question concerned perception of changes in inequality (see Table A9 in Annex A). We have already seen in our descriptive statistics that many respondents think that income and wealth inequalities have increased in the past. These perceptions directly related to preferences over income redistribution. Changes in inequality and wealth variable has very strong relationship with support of redistribution. *The more the people feel that inequalities are increasing, the more they favour redistribution policies.*

Table R3. Models with objective and subjective variables (N=3122)

	(1)	(2)
Highest qualification ≤ elementary school (8 classes)	0.353 (0.138)*	0.616 (0.143)**
Highest qualification: vocational school	0.404 (0.138)**	0.328 (0.140)*
Self-employed	-0.809 (0.260)**	
Employment position: leader, manager	-0.609 (0.195)**	
Marginal activity groups together		0.285 (0.143)*
Relative income position: up-up[a]	0.374 (0.170)*	
Rel. inc. Pos.: up-up, in the lower 5 deciles in year 2000[a]		0.605 (0.252)*
Relative income position: down-down[a]	0.316 (0.137)*	0.342 (0.152)*
Expenditures on cultural activities and recreation	$-5.1 * 10^{-6}$ $(1.4 * 10^{-6})$**	$-3.4 * 10^{-6}$ $(1.6 * 10^{-6})$*
Flat's/house's value between median and 90 percentile	-0.270 (0.122)*	-0.346 (0.129)**
Opinion: inequalities increased	-0.784 (0.117)**	-0.542 (0.120)**
Opinion: inequalities slightly increased	-0.763 (0.214)**	-0.614 (0.250)*
Opinion: no significant change in inequalities	-1.327 (0.277)**	-0.988 (0.320)**
Subjective position in 2002: level 2 or 3	-0.933 (0.264)**	-1.637 (0.397)**
Subjective position in 2002: level 4 or 5	-1.067 (0.266)**	-1.659 (0.395)**
Subjective position in 2002: level 6, 7, or 8	-1.502 (0.316)**	-2.151 (0.429)**
Subj. Mobility: considerably improved material situation		1.501 (0.522)**
General satisfaction: very dissatisfied		0.373 (0.173)*
General satisfaction: very or fairly dissatisfied	0.286 (0.118)*	
Concerned about job loss: fairly concerned	-0.362 (0.130)**	-0.325 (0.160)*
Concerned about job loss: doesn't know		-0.478 (0.177)**
Concerned about job loss: a little bit	-0.444 (0.145)**	-0.695 (0.173)**
Concerned about job loss: not at all	-0.949 (0.224)**	-0.767 (0.223)**
Effect of EU on the chance of empl.: doesn't know	0.233 (0.119)*	
Future prospects: work, children & belongs to inc. quint. 1, 2[b]	-0.426 (0.147)**	-0.508 (0.179)**
Expectations on fin. sit. of the hh: considerably declines	0.622 (0.239)**	
Expectations on fin. sit. of the hh: considerably improves	0.650 (0.301)*	
Expectations on children's future: doesn't know or much worse	0.467 (0.198)*	0.680 (0.254)**
Log pseudolikelihood at step 0	-3596.93	-3009.70
Log pseudolikelihood at last step	-3202.08	-2716.70
Pseudo R^2	0.1098	0.0974

Notes: Robust standard errors adjusted for clustering on households in parentheses.

* significant at 5% level, ** significant at 1% level.

Dependent variable of model (1): *Do you agree that the government should restrict the income of the rich?*
Dependent variable of model (2): *Do you agree that the government should allocate more income to the poor?*

Possible answers: essentially disagree (1), more disagree than agree (2), more agree than disagree (3), essentially agree (4).

[a] See notes to previous Table.

[b] This dummy variable signs that he answer to the question *„Do you see any chance for your household to obtain a better financial position?"* was work prospects, children's future prospects, or other prospects (see Table B2 in Annex B) **and** the person belonged to the 1st or 2nd income quintile in 2000.

Attitudes toward redistribution are basically affected by measures of inequality growth perceived by respondents. In our previous studies (see Kapitány and Molnár (2004) and COMPPRES D14) we showed in details that increase in inequality in Hungary was moderate at the end of 1990s, or at least, was average size comparing with both inequality growth of the other periods of transition, and inequality growth in the other East-European countries in the same time. In spite of this fact, the majority of respondents feel that income and wealth inequalities considerable increased in Hungary from the middle of the 1990s. *The people who perceive increasing inequality interpret greater inequality as a risk in income, and they demand more redistribution for avoid this increased uncertainty.*

Valuation of the current material situation of households – opposite to the calculated material situation by reported data – is a dominant variable on both of our models. Respondents could place their household to 9 steps on the income/wealth ladder, but nobody choose the highest step (see Table A3). *Individuals thinking themselves to be wealthier look less favourably to redistribution.* People who keep themselves the poorest are the most supportive of redistribution policies, they are the reference group in the model. No difference between the next four steps and the wealthiest 14 per cent population are the most averse to both of redistribution types. Attitude toward redistribution of non-responders is the same as that of the poorest respondents. Variable of the perceived material situation pushed out the continuous variable of expenditure and variable of dept owners from the model. It seems to be straightforward that people having debts feel their material situation worse than it is.

In sum, we can say that the attitude toward redistribution is basically determined by the rough valuation of the wealth position. The results show that as people rank their position on the economic scale, the majority of the sample (80 per cent of the population) is placing themselves in the middle categories, under the median, even if they are slightly above or under this position according to their real value of wealth. This fact, that the majority of people rank themselves lower than the middle, may explain the huge support of redistribution.

Surprisingly and contrasting with our expectations, the strongly upward mobile people – ceteris paribus – are very favourably to redistribution. This group perceives the changes of their position very well, almost all of them are in the highest three deciles in 2002, so they are the wealthiest. However, their subjective ranking is much lower, according to their subjective valuation of their material situation, none of them is higher than the sixth level. However, we have to add to this analysis that this group is very small, they consist only the 1 per cent of the sample.

According to our hypothesis the frustration of people discontented with their life affects their opinion concerning restriction of income of the rich. Analysing the nature of the link between satisfaction and demand for redistribution, we find that *dissatisfied respondents are more favourably to redistribution than the average.* In the case of the first redistribution question

the very or fairly dissatisfied people have the same opinion, so we get significant result only when we draw these two categories together. However, in the case of the second redistribution question we have quite a difference between the opinion of the very dissatisfied people and of the rest of the people.

People's tolerance of uncertainty and income risk is mainly determined by the assumed cost of losing job and the extent of their concern about it. Our question was the following (see Table A7): "To what extent are you concerned about the idea that you or somebody else in your family loses her/his job?" The question was quite broad enough with respect to family members, that is why even 60 per cent of the retired people gave valid answer to this question. The share of respondents identified by the answer "Non specific, doesn't know" was almost 20 per cent in all, and 6 per cent of the families with active wage-earners.

In the case of both of the redistribution questions we can establish that *the more the people are being concerned about losing their job, the more they have a strong tendency to support redistribution.* Having experienced unemployment or being concerned about the idea of losing job increase the risk aversion and deeply affect people's view of redistribution policies. There is a difference between the two types of redistribution only in the case of responses "non-specific, doesn't know". In the first model this group has significantly the same opinion what the "very concerned" group does, that is why these two groups make up the reference group of the first model. In the second model the reference group consists of the "very concerned" respondents. Respondents identified by the answer "non-specific, doesn't know" are significantly less favourably to redistribution than the "fairly concerned" group.

Almost 30 per cent of respondents (see Table B3 for the raw distribution) answered "doesn't know" to the question "What kind of effect will have Hungary's joining the EU on the chances of the Hungarian employees?" Our hypothesis was that those who expect negative effect will be rather favourably to restriction of income of the poor than the others. In contrast with it we found significant difference among those people who gave valid answer and who could not answer the question, respectively. This latter group is more favourably to restriction of income of the rich than the others. We found the same in the case of supporting redistribution for the poor, but it is not shown in the table, because the variable is significant only at 10 per cent level.

The same kind of result was found in the case of expectation with respect to the children's life in the future (see Table B5). The attitude toward redistribution of respondents with children who choose the answer "doesn't know" is the same as the attitude of those who expect their children to live in much worse situation compared with them in the future. These people are more favourably to redistribution than the others.

In sum, we can establish that the most frustrated and indecisive people are those who know nothing about the immediate and the distant future, and – ceteris paribus – they are more averse to the rich, and first of all the government is supposed by them to improve the future life conditions of their children.

In conclusion, in this section we focused on the uncertainty connected with the present and the future, and the link between uncertainty and demand formation of redistribution. This relationship can be introduced quite well with the aid of the main determinant of the competitive pressure, namely, with the aid of valuation of the labour market situation. *Labour market status is a major element of dissatisfaction and demand for redistribution.* In the case

of questions concerning changes in consumer markets and changes in position of Hungary in the near future we did not find the same relationship.

In the case of question concerning financial situation of households in the next three years (see Table A6 for the raw distribution) we can see that those people are favourably to redistribution who expect either their position to deteriorate in the future, or – surprisingly – their position to improve significantly. If we draw out the control variable of the cultural and recreation expenditure, those people who expect their position to improve significantly do not support redistribution anymore. In this case we can assume that we introduce here a unique attitude of people having high cultural and recreation expenditure, having presumably high level cultural capital, and they feel antipathy toward the "uncultured rich".

Among our questions concerning with the future that question proved to be the most useful which is taking into consideration and counted the private chances of the respondents instead of changes of the outside world. According to the answers of question "Do you see any chance for your household to obtain a better financial situation?" (see Table B2) we divided the observations into two groups. Those people are in the first group who answered the followings: work prospects, children's future prospects, or other prospects. In the second group we find those who answered the followings: no prospect, health status prospects, doesn't know. We call the first group *active,* referring to the fact that the chances what they choose are depending on the extent of their activity. The second group is called *passive.* (E.g. waiting for better health is a passive action and, in this sense, is similar to the "no prospect" situation.) *The active people favour redistribution less than passive ones*; however, in the case of our second redistribution question the difference is significant only at 10 per cent level.

The situation becomes much clearer if we distinguish active people by their relative income positions. Those respondents oppose only both types of redistribution who were belonging to the two lowest income quintiles in 2000. This argument also supports the POUM hypothesis.

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II.3 Demand for redistribution and inequality: A case study for Romania

Overall, in 2003, the subjective well-being of the Romanian population is low. Compared with the previous year, "life worsened" for 41% of the population. In the next year, only 29% of the population expects life to be "better" or "much better". 76% are not satisfied with their financial situation and 57% are not satisfied with their household financial situation. Moreover, only about 40% of the population expects their household financial situation to improve in the next three years. (see tables in Annex A and Annex C)

The dominant perception is that the income inequality has strongly increased since 1995-1996. In October 2003, "the difference between rich and poor" was assessed as "much higher" or "higher" by the great majority of the population (Table A9, Annex A). People perception is consistent with the dynamic of the Gini coefficient (Deliverable 14, 2004).

Correspondingly, the demand for redistribution is very high. The great majority of the population considers that (POB OSF 2003):

- "the state should provide more funds for the poor" (52% "fully agree" and 38% "rather agree"), and "the state should limit the rich people's income" (40% "fully agree" and 30% "rather agree"),
- "the state should take more responsibility in people's welfare" (76%) by improving the social benefits, creating jobs, reducing corruption or by improving government performances,
- "the state should provide jobs for all those willing to work" either by "creating state enterprises" (37%) or by "encouraging the development of the private sector" (38%),
- "the state should increase funds for education" (95%), "health system" (98%), "support for families with children" (94%), "support for unemployed" (86%), and "assistance for elderly" (98%).

Often it is supposed that income inequality reduces individual well-being, which is used as an argument in favor of redistribution policies. But individuals appreciate income inequality depending on their personal perspectives (Alesina et al., 2001). If they see inequality as a ladder that may be climbed, they tend to be more tolerant toward inequality and, consequently, the demand for income redistribution is limited. This perspective is in line with Hirschman's (1973) "tunnel effect", according which in transforming societies people appreciate inequality conditionally on the prospects for progress. Thus, positive expectations for future positions influence the relation between inequality and satisfaction, and thus diminish the demand for redistribution. The demand for redistribution lower in the "new Europe" than in the "old Europe" countries (Senik's, 2004) is a strong evidence in this respect.

In this section we analyze demand for redistribution in Romania and its relations with inequality and perceived mobility.

For measuring "demand for redistribution" we built a variable as factor[24] score of two questions: 1. "Do you agree that the state should provide more funds for the poor?" and 2. "Do you agree that the state should limit the rich people's income?" (1 - "fully agree" to 4 - "fully disagree"). The variables ranges in the interval (-3.35, 1.39), where negative values indicate tolerance toward inequality and low support for redistribution policies, while the

[24] Factor analysis significant for p=.000. Extraction method: principal components. The model has a unique factor ("demand for redistribution") that explains 64% of the total variance.

higher the positive value, more inequality-adverse and stronger in favor of redistribution policies the individual.

Table 1 Average values of the factor "demand for redistribution" by categories of the component variables

	Essentially disagree	More disagree than agree	More agree than disagree	Essentially agree	All
State should provide more funds for poor	-2.42	-1.54	-0.53	0.69	0.000
State should limit the income of rich	-1.38	-0.85	-0.10	0.85	0.000

Data: POB FDS 2003. Factor analysis significant for p=.000. Extraction method: principal components. The model has a unique factor ("demand for redistribution") that explains 64% of the total variance.

We regress this "demand for redistribution" variable on a series of socio-demographic predictors as well as a set of attitudinal and subjective indicators related to inequality. These are described below.

As mentioned above, the great majority of the population agreed that the government should either provide more support for the poor or limit income of the rich or both. However, only 54% of the individual from the richest income decile were in favor of "restricting the income of the rich" and they were not particularly the individuals who expect their personal situation to deteriorate in the next 3 years as it was the case in Russia in 1996 (Ravallion and Lokshin, 2000). Thus, at least in 2003, Romania differs from Russia 1996 and seems more like the USA 1998 (Fong, 2001) as the household wealth does explain attitude towards redistribution. Regardless expectations for the future, purely selfish motives strongly influence the Romanians' attitude toward redistribution.

The demand for redistribution is a demand for insurance protection. Thus, not only those declared poor based on "objective" measures of income demand for protection but also those who self-identify as "poor" or "in need". For this reason, we include in the regression model the self-identification on the scale from 1-poor to 10-rich. By self-positioning as "poor", people also self-identify as potential beneficiaries of the redistribution policies, thus they have a self-interest concern.

However, in explaining attitude towards redistribution selfish motives need to be combined with individual's ideology concerning: "paternalist" *versus* minimal role of the state, individual responsibility *versus* social determinants, law breaking *versus* effort and "merit", luck or social acquaintances.

Because in a transforming society as Romania, the static inequality conveys weak informational content, POB FSD 2003 measured the perceived dynamic of inequality based on the question: "Compared to 1995-1996 you would say that the difference between the poor and rich is now …?" (1 – "much lower" to 7 – "much higher" to). We have also included this variable in the multiple regression model.

Table 2 Determinants of the demand for redistribution

	Standardized coefficients Beta	t	Sig.	Collinearity Statistics	
				Tolerance	VIF
(Constant)		2.855	.004		
Residency (1=urban, 0=rural)	-.069	-2.492	.013	.765	1.307
Education (number of completed grades)	-.095	-3.330	.001	.708	1.413
Sex (1=male, 0=female)	-.062	-2.529	.012	.976	1.025
Ln(equalized monetary monthly household income)	-.081	-2.632	.009	.619	1.614
Self-identification on the scale 1-poor to 10-rich, 2003	-.062	-2.262	.024	.762	1.313
Maximal role of the state (dummy)	.132	5.446	.000	.990	1.010
Poor people are lazy (dummy)	-.120	-4.856	.000	.956	1.046
Rich gained fortune by breaking the law (dummy)	.103	4.205	.000	.967	1.034
Perceived dynamic of inequality	.078	3.167	.002	.967	1.034

Data: POB FDS 2003. N=1,554 cases. R Square 10%. Durbin-Watson 1.708. Dependent Variable: Demand for redistribution

Notes: *Household income* – In-kind income from self-production is not included. *Role of the state* – Believe that the state should strongly intervene in the activity of press and of political parties. The other variables are defined above.

We have also tested the influence of expectations and subjective mobility (as defined in section 2.2). Only one variable proved to be significant, namely worry that someone in the household might lose his/her job. The more worried the individual, the higher his support for redistribution policies.

The effect of age is mediated by education, residency and gender. Neither household size, nor number of children is a significant predictor.

A series of regression models showed that satisfaction[25] with government performances have no influence on demand for redistribution policies. In fact, satisfaction with government performances has influence neither on individual's belief regarding the role of the state, nor on poverty ideology. By contrast, agents satisfied with government performances are more likely to perceive inequality as diminishing, corruption as less, and success possible by means others than illegal.

The highest demand for redistribution come from rural[26] residents, particularly women, poorly educated persons, poorer both in "objective" and "subjective" terms, persons that believe in the maximal role of the state, and individuals who think that the poor are victims of the transforming society, while rich gain their fortunes by illegal means.

In conclusion, in Romania, the demand for redistribution is a combined effect of selfish motives with the agents' perception of the process that generates income distribution and income mobility as distorted. In relative terms, individual's ideology and perceptions of other people's opportunities have more predictive power than his/her position in the social structure.

In conclusion, the Romanian society is characterized by high demand for redistribution. Partly, this is linked to the country history. The nostalgic groups of population still expect the government to act as the "daddy-state". However, to a larger extent, it represents a reaction to the transition shock. Redistribution policies are expected to "treat" the "unacceptable" inequality resulted from a mobility perceived as inequitable: "this unjust society" (in

[25] Factor score of the variables related to satisfaction with government performances in industry, agriculture, privatization, standard of living, job creation, fight against corruption, and social policies.
[26] The poverty rate in Romanian rural areas was over 40% in 2002. (Tesliuc et al., 2003)

transition) that pushes many into poverty, while allows few to gain fortunes through corrupted ways.

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III. Income comparisons, aversion to inequality and mobility. An East-West comparative approach [*]

Claudia Senik**

Abstract This paper asks how income distribution affects individual well-being and tries to explore the idea that this relation depends on the degree of mobility and uncertainty in the economy. It mostly concentrates on the relation between satisfaction and reference income (defined as the income of one's professional peers), and hinges on the micro-econometric analysis of household survey data (mostly panel), including subjective attitudinal questions. Using over one million observations, it uncovers a divide, in the perception of income inequality, between "old" -low mobility- European countries on the one hand, and "new" European post-Transition countries and the United States, on the other hand. Whereas "jealousy" is dominant in the former, "ambition" is even stronger in the latter.

Key words: income distribution, comparison income, social interactions, panel data, subjective well-being, Transition, European Union, United States.

JEL classification: C23, D31, D63, D83, O57, Z13, I31, H24

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III.1 Introduction

In modern democracies, income redistribution is certainly one of the issues that most strongly divide the population into constituencies for different political parties. On what grounds are these political attitudes based: self-centered interests or concerns for others, benevolence or envy? This paper is one of a series that investigate the subjective foundations of the demand for redistribution (e.g. Piketty [1995], Benabou and Ok [2001], Alesina et al. [2000, 2002, 2004], Corneo and Gruner [2000], Ravallion and Lokshin [2001], Fong [2001, 2004]; see Senik [2005] for a survey). It covers two dimensions of the question. The first is attitudes towards income inequality in general, i.e. the distribution of aggregate income. The other aspect of inequality is the gap between my own income and that of some relevant other. When the income of, say, my professional peers increases, does it make me envious or does it trigger a positive flow of anticipatory feelings [Caplin and Leahy, 2001] by raising my expectations? In other, more mundane words, it comes to one's position on the national income ladder, which is the dominant passion: ambition or jealousy?

Jealousy, i.e. relative utility, implies that my utility derives not only of my own consumption but rather from a combination of absolute and relative consumption U(C, C/C*) where C* denotes some measure of the consumption of some relevant others. If so, indirect income utility must also be written U (Y, Y/Y*), where Y* is the income of my reference group, and one expects a negative sign on the partial derivative of the second term.

Jealousy, however, is not the only way one can look at other people's income. Ambition can sometimes be a more powerful passion. Following Hirschman [1973], consider a society composed of two individuals (or groups of individuals). The indirect utility of individual A depends on her own revenue Y^A, on her expected revenue E^A and on agent B's revenue Y^B. Suppose that A's expectations partly depend on B's observed income. The utility function of A is: $U^A = V(Y^A, E^A(Y^B), Y^B)$. The sign of $\delta V / \delta Y^A$ is unequivocal. It is also clear that the term $\delta V / \delta E^A$ is positive and reflects the depreciation rate of agent A. However, the sign of the partial derivative $\delta V / \delta Y^B$ is ambiguous: $\delta V / \delta Y^B = (\delta V / \delta E^A . \delta E^A / \delta Y^B) + V_1$ (1).

The first term of equation (1) is positive ; it represents the cognitive effect of B's income, Y^B, on A's utility. The second term V_1 represents the direct effect of Y^B on V; its sign depends on how A feels about B. If, in line with the theory of relative income, her feelings are dominated by envy rather than compassion, then this term is negative. Hence, the effect of an increase in B's income, everything equal, is *a priori* unknown, depending on the relative importance of the cognitive and comparison effects. Empirically, the sign of $\delta V / \delta Y^B$ can be interpreted as a test of the relative importance of these two effects. A negative sign implies that V_1 is negative and that jealousy dominates ambition ($\delta V / \delta E^A . \delta E^A / \delta Y^B$); a positive sign suggests that the information effect[27] (ambition) dominates.

Hence, the same indicator of income gap, i.e. the difference between my own income and that of a reference group, can be interpreted in two different ways, and accordingly, have two opposite effects on individual well-being. The same reasoning can be held concerning the effect of income inequality in general: the prospect for upward mobility can dominate the aversion for inequality, depending on the mobility expected by individuals (e.g. Benabou and Ok [2001], Piketty [1995]).

[27] Hirschman [1973] dubbed this the "Tunnel effect". The idea is that individuals can derive positive flows of utility from observing other people's faster progression if they interpret this movement as a sign that their turn will come soon, for instance if the other lane of cars starts progressing towards the exit while their lane is still immobile during a traffic jam inside a tunnel.

The reason why it is important to distinguish these two different types of social interactions (see Manski and Straub [2000]) is that they imply different policy measures: pure inequality aversion should lead to measure to equalize income, whereas the prospect for mobility does not. Similarly, income comparisons have many consequences that cannot be derived from informational learning; in particular, they call into question the relevance of growth as an objective of economic policy, and as an aggregate measure of welfare (Frank [1997], Lungqvist and Uhlig [2000], Cooper et al. [2001], Easterlin, [2003], see Luttmer [2004] for a more extensive list). Whether ambition dominates jealousy or not is thus a matter of interest for economic policy.

This paper argues that both types of interactions always coexist but that their respective importance depends on the degree of mobility and uncertainty of the economic environment, as perceived by a country's inhabitants. It mostly concentrates on the perception of reference income, defined as the typical income of the group of people who share my productive characteristics. Using a comparative micro-econometric approach, with over one million observations, it asks how the income of one's professional peers affects individual well-being, as measured by subjective satisfaction variables[28].

To date, the existing evidence about comparison income, based on subjective data, has essentially been obtained using single country studies in stable industrialized Capitalist countries. Existing studies mostly confirm that utility is relative with respect to income, starting with van de Stadt *et al.*'s [1985] work with Dutch panel data, followed by Clark and Oswald's [1996] and Clark's [2003] studies using the *British Household Panel Survey*, and Ferrer-i-Carbonnell's paper [2004] based on the *German Socio-Economic Panel*[29]. The evidence pertaining to the United States is less straightforward. McBride [2001], Blanchflower and Oswald [2004] and Luttmer [2004] tend to confirm the relative income hypothesis, but Di Tella and MacCulloch [2003] reach different conclusions. In a companion paper, Senik [2004] produced results confirming Hirschman's conjecture in the case of Russia. Ordered probit regressions showed that the positive influence of reference income on life satisfaction is stronger the more uncertain agents are about their professional and material future, and the higher is their income volatility. The effect was also stronger for younger individuals (under 40 years old) whose professional future lasts longer. The positive influence of reference income on individual satisfaction did not depend on whether personal income has increased or decreased, nor on whether personal income has moved in the same direction as reference income.

The present paper proposes a systematic comparative approach. It uses two types of variability: time variability (country panel data whenever available) and differences between Eastern Europe, Western Europe and the United-States. The time dimension is necessary to control for idiosyncratic cultural effects. In terms of country differences, I take it that Eastern and Western Europe are exogenously different in terms of volatility, and that America is (perceived as) more mobile a society than Western Europe. In the spirit of Alesina et al. [2000, 2002, 2004], the idea is to relate these differences in economic environments to the differential impact of reference income (and of income distribution in general).

I show that the effect is negative in "old" European countries, whereas it is positive in post-Transition economies and in the United States. I also show that the demand for redistribution is lower in Eastern countries. Together with the evidence brought by Alesina, di Tella and MacCulloch [2004], this suggest that the attitude towards inequality divides Eastern Europe

[28] The use of subjective data often raises surprise or suspicion; we refer to Frey and Stutzer [2002a and 2002b] and Senik [2005] for a justification of the recourse to such variables.
[29] See Senik [2005] for more references.

and the United States on one side, and "old Europe" on the other side. I relate these findings with the degree of perceived income mobility in these economies.

The next section presents the empirical strategy. Section 3 presents and discusses the results and the last section concludes.

III.2 Empirical Strategy

In order to test the importance of jealousy versus ambition, I simply divide the income of individual A into two parts: reference income (Y^B) and the surplus of individual income beyond reference income ($Y^A - Y^B$). The test thus consists in observing the sign of the coefficient on Y^B, and checking whether it differs significantly from that of the residual ($Y^A - Y^B$). If the latter is true and the coefficient on Y^B is negative, then comparisons do seem to be at work and to dominate information effects. If the coefficient on Y^B is positive and still differs from that of ($Y^A - Y^B$), one can infer that ambition dominates jealousy. However, if both coefficients turn out to be statistically identical, one can reject the assumption of income interactions of any type.

In order to test these assumptions one against the others, I identify three different types of economic environments, and try to relate them to the perception of other people's income and to the demand for income redistribution. First, I consider that Transition and post-Transition countries are economies with a high level of uncertainty: uncertainty about macroeconomic variables such as GDP and employment, about the comparative advantages of the country, and microeconomic uncertainty about the adaptation of individual firms and workers to the changing demand for their specific products or skills. This translates into a high degree of volatility in individual incomes. By contrast, West European economies are considered to be far more stable and predictable. Note that for Poland, my panel data include both the pre-transition (1987-1990) and post-transition (1994-2000) periods. This allows me to capture the effect of the sudden and exogenous increase in volatility brought about by the overnight implementation of the shock therapy on the first of January 1990 [Sachs, 1993].

Western Europe and the United States, in turn, are taken to differ by the degree of perceived income mobility (Alesina et al. [2004]). The authors have shown that this reflects on the demand for redistribution across the Atlantic Ocean. Here, I test whether this influences the perception of one's professional reference group's income.

Eventually, using a total of 1157000 observations, split 1009000 for the 15 European countries of the *European Community Household Panel*, 104000 for Transition countries (Russian, Hungarian and Polish household panels and the three Baltic countries household surveys), and 44000 for the United-States (*General Social Survey*: 1972-2002), I test whether an increase in reference income is associated with individual satisfaction or dissatisfaction.

In a later stage, I also analyze the demand for redistribution and relate it to the perception of reference income. Alesina, di Tella and MacCulloch [2004], Alesina and La Ferrara [2000] and Alesina and Angeletos [2002] have established that the demand for redistribution is higher in Europe than it is in the United States. Using a new database, the *European Social Survey* [2002], I find that the demand for income redistribution is also higher in "old" Europe than it is in "new" post-Transition countries, and that it decreases with income mobility.

Data

The choice of databases is guided by the requirement that they include satisfaction variables and, if possible, be panel[30]. For "Western" European countries, I use 8 waves of the *European Community Household Panel* (ECHP), which was run annually from 1994 to 2001, and contains 14 European countries in a harmonized format[31] (919000 observations). I also use an additional separate larger database with 90000 observations, the French component (same years), provided by the national statistical office (INSEE).

Concerning the "Eastern" part of the sample, I use household surveys from six different countries: Russia, Poland, Hungary, Estonia, Latvia and Lithuania. The three former are panel, while the latter are cross-section. For **Russia**, I use rounds 5 to 9 (1994-2000) of the *Russian Longitudinal Monitoring Survey* (RLMS), a representative stratified sample of Russian dwelling units that includes 11130 individuals. For **Hungary**, I use the TARKI *Hungarian Household Panel*, that runs from 1992 to 1997 (6 waves) with 8237 individuals. To the best of my knowledge, there is no panel survey of **Baltic** households including subjective data. I use the *NORBALT II* survey of Estonia, Latvia and Lithuania that was run in 1999 on a representative stratified sample of the national population. The total Baltic sample comprises 10539 non-missing observations. For **Poland**, I use the national representative household survey ran by the national statistical office. Part of the national survey is organized as a panel that is renewed every 4 years. I use three separate panels: the first, 1987-1990, contains over 11000 observations; the second, 1994-1996, has 9618 observations; and the third, 1997-2000, has 6104 observations (from 1654 to 2498 individuals per year). The data pertaining to the years 1991-1993 was not made available to me.

Concerning the United-States, I use the *General Social Survey*, conducted by the *National Research Center* at the University of Chicago since 1972, which includes from 1500 to 3000 individuals per year, for a total of 43698 observations, and contains happiness and other attitudinal questions. The *GSS* is a representative sample of the English or Spanish speaking American adults. This is not panel data, but I am not aware of any American panel data that would include the needed information together with a satisfaction question.

Lastly, I use the newly issued *European Social Survey*, which contains objective and attitudinal information about citizens of 21 countries of the European Union, including four "Eastern" formerly Socialist countries. Descriptive statistics of all databases are presented in the Appendix.

A Two-Stage Estimation Strategy

The method comprises two stages. In the first stage, I estimate the "reference income" of each individual in the sample, where reference income is interpreted in a professional sense, i.e. the income of people who share my productive characteristics. I do this for two reasons: first, people with the same skills and occupation offer a natural benchmark for comparison; second,

[30] Of course satisfaction variables differ according to the databases at hand, although they are almost identical for all the countries of the ECHP, hence for all "Western" European countries. Accordingly, we do not pool all the observations together, but run separate regressions for separate databases.

[31] In principle, the survey itself is harmonized in the sense that the same questions, with the same response categories, are asked of households in the various countries. Some countries withdrew from the project after a number of years. This applies to the United Kingdom, for which there are only 3 years of true ECHP data (1994-1996). To make up for this defection, the ECHP data includes the national British Household Panel Survey for the years 1995-2001. Some years are missing for other countries as well: data from Germany and Luxembourg are only available for the years 1994-1996; 1994 is missing for Austria; and 1994 and 1995 are missing for Finland.

considering learning from others, I can learn about my own prospects by observing the average destiny of my professional peers, i.e. the average pay for people who share my skills. Hence, the "professionally equivalent" is a suitable reference category with which to test the information *versus* relative income conjectures.

I thus estimate, for each year-country, the logarithm of the typical real income of an individual, based on his sex, education, years of experience, occupation, region and industry (when available). I run this estimation over the whole sample of individuals, excluding those who do not report labor market income, following the idea that comparisons and extraction of information are based on the reference group income that is observed, and not on an econometric reconstitution of what that income would have been had they all fully participated in the labor market. However, I have checked that correcting for participation bias using Heckman's [1979] maximum likelihood estimator, with gender and the presence of a young child as selection variables, does not change the results (Senik, 2004). Whenever possible, I use pure labor income excluding transfer income, so as to capture the part of the revenue that is due to the characteristics of the individual and not to his family situation.

In the second stage, I include the first-stage predicted individual income in a well-being equation. Hence, I regress satisfaction variables on objective socio-demographic variables together with the estimated reference income and the "residual" individual income (literally the residual from the first-stage estimation equation). Depending on the dataset, I use life satisfaction, financial satisfaction, or satisfaction with economic situation; the latter are acceptable proxies for economic well-being, or welfare [Ravallion and Lokshin, 2001].

To avoid multicollinearity, I exclude all of the right-hand side variables in the first stage estimation from the second stage life satisfaction regression, except gender (which has an obvious influence on both variables, but for different reasons). I believe it is reasonable to admit that the productive characteristics on the right-hand side in the first-stage estimation only influence life satisfaction via reference income. As reference income is a prediction from a first-stage estimation, the conventional standard errors of the second-stage estimation are unreliable. I thus systematically report bootstrapped standard errors, based on 1000 replications.

As described in the Appendix, satisfaction variables are measured on 4 to 9 point scales, depending on the dataset. One well-known difficulty with subjective data is to implement panel data techniques to deal with individual heterogeneity, while respecting the ordinal nature of the satisfaction variable (there being no accepted general method for estimating ordered probit or logit with fixed effects). Here, I estimate conditional fixed effect logit models[32]. This implies collapsing the satisfaction variable into two categories (satisfied/dissatisfied), which leads to a substantial loss of information; following Frijters and Ferrer-i-Carbonell [2004], I consider that, even so, this is a price worth paying for controlling unobserved individual heterogeneity.

As my main interest lies in the influence of reference income, it is important to control for actual residual individual income. A standard caveat is that income is likely to be endogenous to satisfaction for two possible reasons. The first is unobserved individual heterogeneity, say "personality". This should be taken care of by panel techniques. The second risk is that income and satisfaction may vary together, due to an omitted variable (say health, or a

[32] Some robustness tests require the use of time invariant data, or of variables that are not applicable in fixed effects estimation (age for instance). In this case, I use ordered probit models.

macroeconomic shock). To deal with this, I include time dummies. When available, I also control for household expenditure in order to take care of possible measurement errors of the income variable. As is often the case, I use the natural logarithm of income: in the particular case of my model, this reflects concavity of the utility function. The individual welfare function I estimate hence depends on current real "residual" individual income, the individual reference group's income, time dummies and time varying socio-demographic characteristics.

III.3 Results

The results are consistent with a setup *à la Hirschman*: information effects are dominant in transition countries, whereas comparison effects are pervasive in stable European countries. Moreover, information effects also are dominant in the American context. Depending on the available information in each database, I run robustness tests to ascertain the cognitive effect of reference income as a function of the uncertainty faced by agents[33].

1. The East-West Divide inside Europe

Table 1 and 2 show the positive influence of reference income on individual satisfaction in Post-Transition European countries and Russia, using conditional fixed effects logit models when panel data are available (Table 1) and ordered probit models when only cross-section data are available (Table 2). Tests systematically confirm that the influence of reference income is distinct from that of residual income (coefficients are significantly different). For simplicity of presentation, tables only display the regressions of income satisfaction. However, the results hold for other categories of subjective satisfaction. In **Hungary** for instance, reference income exerts a positive influence on satisfaction with future perspectives, with life, and with standard of living; it also improves financial expectations. In **Baltic countries** as well**,** reference income exerts a positive influence on satisfaction with economic situation over the past 12 months, on expectations of improvement in the household's economic situation over the next 12 months; and even tolerance of inequality. These results hold whether the regressions are pooled across countries or separate by country (Table 2).

A spectacular result is obtained with **Polish data** (Table 1). Up to 1990, Poland was still a Socialist regime (notwithstanding partial reforms), hence a regime with extremely little change and uncertainty in terms of occupations and income. By contrast, Transition began abruptly in January 1990, with the so-called "shock therapy" involving *inter alia* overnight liberalization of prices and transaction. This triggered a dynamic process of change in the income distribution and individual prospects [Sachs, 1993]. As an illustration, Table A.XI in the Annex displays an index of mobility, defined as the average square change in deciles compared to the previous year[34]. The order of magnitude of this index rises from about 2 before 1990, to about 4.5 afterwards. In order to take this sharp evolution into account, I leave year 1990 aside and run a conditional fixed effects logit model on the three separate sub-periods. I obtain a negative sign for the coefficient of reference income with the panel 1987-1989, and a positive coefficient for the two subsequent panels (Table 1). I interpret this contrast between the sub-periods of the Polish panel as a powerful illustration of the fact that reference income provides a valuable information when instability rises.

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[33] For lack of space, I do not reproduce the entire regressions, but we will communicate them to any interested reader. The structure of satisfaction equations is well-known and stable [di Tella, MacCulloch and Owald, 2003]: satisfaction depends strongly on age and age square, marital status, income and gender, and more ambiguously on education.

[34] See Atkinson, Bourguignon and Morrisson, [1992] for a discussion of this indicator.

By contrast, Table 3 shows that in stable European countries, the sign of reference income is negative, as in Clark and Oswald [1996] and Ferrer-I-Carbonnell [2004], suggesting that comparison effects dominate information effects. As a complement to this result, I have used French data for which I have more subjective variables, from a separate French source (INSEE)[35]: I find that not only does financial satisfaction decrease with reference income, but also do other subjective variables, such as the probability of declaring that one's "*situation has improved compared to last year"*, and that "*household resources are sufficient to live on"*. This comparison effect is attenuated for individuals in the upper part of the reference group: comparisons are more effective upwards. A similar asymmetric result was obtained by Ferrer-i-Carbonnell [2004] with German data.

An alternative explanation would be that the share of the variance of individual income that is explained by reference income is lower in ECHP countries, so that the size of the ratio is smaller in these countries, which would justify the higher importance of residual income. However, the data are not consistent with this view. The R2 of the estimations of reference income is in the magnitude of 0.25-0.35 in all countries except ECHP countries where it is higher; and the size of the ratio of residual income over reference income is smaller in ECHP countries (Table A.X in the Annex).

If reference income is taken as to carry information about one's perspectives, then its positive value should be higher for younger people, whose future perspectives are longer. This is confirmed by Table 4 who shows that indeed, the positive impact of reference income is higher for younger people, i.e. under the age of 41. The positive impact of reference income is also higher for individuals who experience particularly high income volatility, i.e. those whose standard deviation of real individual income is superior to the national mean standard deviation (Table 5). In summary, the data from post-Transition countries support the interpretation of reference income as a source of information: younger people and those more exposed to uncertainty give a higher value to the information conveyed by reference income.

Hence, the difference between Eastern and Western Europe seems to pertain to the higher volatility and uncertainty that Easterners are confronted with. I now turn to the American environment, which is not as volatile as that of Eastern Europe, but is considered to be more mobile than that of Western Europe.

2. Americans do not Envy their Professional Peers

A surprising result is that, in the United-States, happiness and the feeling that life is "exciting" rather than "dull" (two different wordings of the satisfaction question in the survey) increase with the income of one's professional peers (Table 2)[36]. Hence, if Americans make income comparison, it is not within their professional group. This may be related to the idea that the United States is a more fluid society, in which the place of each individual is not prescribed but can be conquered. In this context, one can rejoice from belonging to a higher status group or deplore belonging to a descending group.

If the interpretation of this Europe/USA divide lies in the difference in social mobility, then the positive effect of reference income should be reinforced for those who believe in mobility. Indeed, I find that when respondents declare that their living standard is higher than that of

[35] See Senik (2004b) for the corresponding tables.
[36] For space constraints, I present the result of the regression on the pooled data (1972-2001) including year dummies, but I have checked that the result holds when one performs the regression year by year.

their parents, the effect of reference income is stronger (columns 5 and 6 in Table 6). The effect of reference income is also higher for American respondents who believe that they would easily "find an equally good job" if needed, an indication that these respondents feel professionally stable (columns 3 and 4 of Table 6).

These observations somehow differs from that of Blanchflower and Oswald [2004] and Luttmer [2004] who provide empirical evidence of comparison effects and relative utility in the United States. This is certainly because the authors use different notions of reference income: the former retain either the State income per capita, or the upper quintile of the State's income distribution; the latter looks at the average earnings of neighbors. It is clear that the informational content of these income categories differs from that of one's professional group.

3. From Reference Income to Income Inequality : the Divide between the "Old" Europe versus the "New" Europe and the United-States

So far, I have shown that in post-Transition countries and in the United-States, the typical income of my professional peers is used as a source of information rather than as a benchmark for comparison. By contrast, in Western Europe, comparison effects are dominant. I claim that this has to do with the perceived economic environment. Americans and East-Europeans[37] perceive a higher degree of mobility (and uncertainty for the latter), which gives a higher value to information. Of course mobility is not equivalent to uncertainty; however, both can have the effect of neutralizing the aversion of people to inequality, by emphasizing the informational content of the income distribution. Is the divide between the "Old" Europe *versus* the "New" Europe and the United-States also relevant as far as the attitude towards income redistribution is concerned?

I use the newly issued first round of the *European Social Survey* database that covers 21 countries of the European Union, including four "Eastern" formerly Socialist countries. This survey contains a series of attitudinal question, including the question: "*Do you agree that the government should take measures to reduce the difference in income levels?* (1= *agree strongly* to 5= *disagree strongly*)". I regress the answer to this question on a series of classical socio-demographic variables as well as a dummy, which takes value 1 if the respondent is from an Eastern country (Table 7). It is a robust result that the coefficient on this "East" dummy is significantly negative (column 1).

Further, I build income mobility indicators, using the 8 waves of the ECHP panel, plus the separate data for Hungary and Poland (Table A.XI in the Annex). I plug these indicators into the *ESS* database, and I regress the demand for redistribution on these indicators together with the usual socio-economic controls. I find (column 1 of Table 7) that the demand for redistribution decreases with mobility, defined as the country average square number of deciles change per individual. Moreover, the interaction of this variable with the East dummy attracts a negative sign (column 2). As the income mobility of women may be influenced by episodes of retreat from the job market, I check (in columns 3 and 4) that the results hold in the regression on the sub-sample of men. I have also checked that the result is unchanged

[37] Table A.XI in the Annex presents the average square number of deciles change experienced by individuals over two years. It is remarkable that the order of magnitude of this indicator is much higher in transition countries than in European countries. Based on real individual income, the average mobility indicator is about 11 in Russia, 7 in Hungary, and 5 in post-reform Poland, as against 2-3 in ECHP countries. (Note, however, that income mobility and inequality in transition countries are certainly overstated by measurement errors, as argued by Luttmer, 2002).

when controlling for the answers of individuals to the questions about their satisfaction with the government, with democracy, with the economy and even to the "liberal" question "*do you agree that the less the government intervenes in the economy, the better for the country?* : *totally agree … totally disagree* (5 modalities)[38]".

This piece of evidence illustrates the fact that the attitude towards inequality differs across the former iron curtain. An illustration is given by the tax structure in Europe. In average, the marginal top personal income tax rate is almost 14 points higher in Western Europe as it is in Post-Transition countries (column 1, Table A.XII in the Annex). Taxes on profits (column 2) are also much lower in Post-Transition countries (19.6% against 33%). VAT, often considered to be a "regressive" tax, precisely happens to be the only tax category whose average level is higher in post-Transition countries. Note that this weakly redistributive tax system was put in place during a period of dramatic rise in income inequality (Table A.XIII in the Annex).

Hence, a set of consistent elements seems to support the conjecture that post-Transition countries do not share the same attitude towards inequality and income distribution[39] as the "old Europe". My interpretation is that this is linked with the period of transformation and high income mobility that the "new Europe" is experiencing, and during which informational effects dominate inequality aversion. Note that this general framework could also contribute to shed some light on the Kuznet's curve, suggesting that one of the reason why inequalities grow during times of development is because agents have a lower aversion for inequality, hence do not elicit redistributive tax policies.

Conclusions

Using mostly panel data, with over one million observations, I showed that the average income in one's professional group affects individual subjective well-being negatively in "old" European countries, whereas the correlation is positive in post-Transition economies. In Poland, the relative importance of these effects is reversed with the beginning of transition: comparison effects dominate until 1989 whereas information effects are predominant from 1990 onwards. Surprisingly, Americans react positively to a rise in their professional reference income, which makes them closer to East-Europeans than to West-Europeans.

I also show that the demand for redistribution is lower in Eastern countries and I relate this with the higher perceived income mobility in the East. Together with the evidence brought by Alesina, di Tella and MacCulloch [2004], this suggest that the attitude towards inequality and income distribution divides New European countries and the United States on one side, and the "old Europe" on the other side.

At a time of ongoing European enlargement, uncovering this divergence in preferences is of interest. This paper suggests that this divergence could be temporary and come to an end when new member countries stabilize. However, whether and when this will happen is not clear. Can a society keep a high degree of mobility for a long period? Whether this is actually the case of the United-States is still an open question[40], even though this seems to be the belief of the inhabitants.

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[38] Regressions on the whole sample give the following coefficients: -0.042 [0.010] on mobility, -0.080 [0.007] on "liberal", -0.043 [0.012] on mobility*East, controlling for age, gender, income, household composition, employment status and education.

[39] Of course, countries of the "old Europe" itself are not perfectly identical in terms of preference for income redistribution. However, even the most liberal of them have higher taxes than do Transition countries.

[40] See for example Fields and Ok [1999], Burkhauser and Poupore [1997], Maasoumi and Trede [2001] and Gottshalk and Spolaore [2002].

Beyond these national differences, one general lesson of this paper is the importance of income non-market interactions. Another lesson is that GDP growth remains an objective and an indicator of welfare, especially in developing countries. With respect to this issue, this paper shows that my welfare not only improves with my own income, but that it sometimes also increases with the growth of other people's income.

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Tables

Table 1. Satisfaction and Reference Income in Eastern Europe
Conditional fixed effects logit estimates

	Russia	**Hungary**	**Poland**		
	1994-2000	1992-1997	1987-89	1994-96	1997-2000
	Life satisfaction	Income sat	Financial satisfaction		
Log Reference Income	**0.490*** **	**0.354*** **	**-0,263*** **	**2.933*** **	**1.697*** **
	[0.117]	[0.030]	[0.027]	[0.362]	[0.438]
Residual Individual Income	0.185***	0.116***	0.249**	1.510***	0.823***
	[0.042]	[0.026]	[0.122]	[0.119]	[0.143]
Observations	8105	13214	3471	4852	2080
Number of persons	1935	2859	1160	1618	720
Pseudo R2	0,03	0,04	0,01	0,09	0,05
Log likelihood	-3011	-5008	-1257	-1619	-717

Controls: household size, marital status, year dummies, log household expenditure.
Russia : *To what extent are you satisfied with your life in general at the present time* ? *Very satisfied … not at all satisfied »* (5 modalities).
Hungary: « *Please tell me on a scale from 1 to 10 how satisfied you are with your income ?».*
Poland : «*How do you evaluate your financial situation: "1.very good, 2.good, 3.normal, 4.bad, 5.very bad".*
Variables collapsed into 2 categories.
Test that reference income is different from residual income, Prob>chi2: Russia: 0.0098, Poland 1987-89 : 0.0242, Poland 1994-96: 0.000, Poland 1997-00: 0.0436, Hungary: 0.000.

Table 2. Satisfaction and Reference Income in Eastern Europe and the United States
Ordered Probit Estimates

	All Baltic	**Estonia**	**Latvia**	**Lithuania**	**United-States (GSS)**	
	1999				1972-2000	
	Economic Satisfaction				Happy	Life exciting
Reference income	**0.762*** **	**0.885*** **	**0.628*** **	**0.747*** **	**0.251*** **	**0.455*** **
	[0.026]	[0.038]	[0.044]	[0.065]	[0.014]	[0.018]
Residual Income	0.455***	0.444***	0.414***	0.595***	0.161***	0.148***
	[0.013]	[0.019]	[0.021]	[0.036]	[0.009]	[0.011]
Observations	17719	8487	5194	4038	31698	21140
Pseudo R2	0,08	0,08	0,07	0,08	0,04	0,03
Log likelihood	-16557	-7874	-5160	-3400	-28356	-17315

Controls: sex, age, age square, household size, children, marital status, country dummies in column 1, year dummies for United-States.
Baltic countries: Economic Satisfaction : « Considering the total situation of your household, please tell me which of the following statements best describes your situation : *we are among the well-offs … we are poor* » (5 modalities).
USA: « General happiness : *very happy*/*pretty happy*/*not too happy* », « Life is *dull/routine*/*exiting* ».
Test that reference income is different from residual income, Prob>chi2: USA GSS: 0.0000, Baltic altogether : 0.0000, Estonia: 0.0000, Latvia: 0.0000, Lithuania: 0.0381.

Table 3. Satisfaction and Reference Income in Stable Europe (ECHP 1994-2000)

Conditional fixed effects logit estimates

« Could you indicate on a scale from 1 to 6 your degree of satisfaction of your financial situation? »

	-1	-2	-3	-4	-5	-6	-7	-8	-9	-10	-11	-12	-13	-14	-15	-16
	All	Germany	Denmark	Netherlands	Belgium	Luxembourg	France	UK ECHP	Ireland	Italy	Greece	Spain	Portugal	Austria	Finland	UK BHPS
Reference Income	-0.933***	-1.552***	-1.586***	-0.702***	-0.814***	-1.459**	-0.697***	-1.472***	-0.808***	-1.231***	-3.084***	-1.042***	-1.739***	-0.385***	-1.129***	-0.941***
	[0.047]	[0.295]	[0.213]	[0.119]	[0.261]	[0.711]	[0.152]	[0.359]	[0.168]	[0.234]	[0.398]	[0.146]	[0.314]	[0.139]	[0.293]	[0.119]
Residual Income	1.084***	1.391***	1.562***	0.442***	1.230***	1.337**	0.441***	1.718***	0.865***	1.920***	2.546***	1.437***	2.063***	1.087***	1.294***	0.958***
	[0.034]	[0.218]	[0.171]	[0.073]	[0.187]	[0.585]	[0.084]	[0.309]	[0.128]	[0.136]	[0.194]	[0.096]	[0.199]	[0.114]	[0.203]	[0.096]
Observations	145569	4390	8651	16465	6832	923	19112	2399	8362	16043	6836	17449	5973	11909	4998	15227
Number of id	28485	1534	1734	3091	1455	319	3282	883	1682	2779	1143	3262	993	2273	1400	2655
Pseudo R2	0,02	0,03	0,03	0,02	0,02	0,02	0,01	0,03	0,02	0,02	0,05	0,03	0,05	0,02	0,05	0,03
log likelihood	-55208	-1546	-3311	-6351	-2601	-329	-7345	-844	-3188	-6014	-2414	-6577	-2048	-4607	-1794	-5730

Controls: household size, marital status, year dummies. Reference income is calculated on the basis of individual monthly wage.
Test that reference income is different from residual income, Prob>chi2: ECHPall : 0.0007.

Table 4. The Higher Effect of Reference Income for Younger People

Ordered probit estimates

	-1	-2	-3	-4	-5	-6	-7
	Baltic	**Russia**	**Hungary**	**Poland**		**United-States (GSS)**	
	1999	1994-2000	1992-1998	1994-1996	1997-2000	1972-2000	
	Econ. Sat.	**Life sat.**	**Income sat.**	**Financial satisfaction**		**Happy**	**Life exciting**
Reference Income	**0.755*** **	**0.194*** **	**0.213*** **	**1.672*** **	**1.337*** **	**0.211*** **	**0.448*** **
	[0.049]	[0.032]	[0.010]	[0.047]	[0.052]	[0.014]	[0.018]
Residual Income	0.504***	0.094***	0.115***	0.016***	0.030***	0.149***	0.146***
	[0.029]	[0.016]	[0.011]	[0.006]	[0.006]	[0.008]	[0.011]
Young*Reference Income	**0.027** **	**0.014** **	**0.022*** **	**0.653*** **	**0.542*** **	**0.018*** **	**0,004**
	[0.012]	[0.007]	[0.002]	[0.024]	[0.027]	[0.002]	[0.003]
Log Household Expenditure		0.243***	0.055***	0.336***	0.417***		
		[0.018]	[0.012]	[0.027]	[0.031]		
Observations	5598	13504	21373	14427	9120	31698	21140
Pseudo R2	0,09	0,04	0,02	0,13	0,12	0,04	0,03
log likelihood	-5225	-17034	-45491	-13977	-9273	-28405	-17316

Controls: sex, age, age square, household size, children, marital status, occupation, religion, nationality, country dummies for Baltic countries.
Cluster (by individual) when panel (Russia, Hungary, Poland).

Table 5. The Higher Effect of Reference Income in Presence of High Volatility
Ordered probit estimates

	Hungary 1996	**Poland 1996**	**Poland 2000**	**Russia 2000**
	Income satisfaction	**Financial satisfaction**		**Life satisfaction**
Reference Income	**0.230*** **	**1.579*** **	**1.423*** **	**0.437*** **
	[0.035]	[0.124]	[0.126]	[0.089]
Residual income	0.072**	0.643***	0.470***	0.119***
	[0.033]	[0.054]	[0.064]	[0.046]
Volatility*RI	**0.017*** **	**0.034*** **	**0.029*** **	**-0,011**
	[0.006]	[0.007]	[0.008]	[0.018]
Observations	1078	3111	1763	713
Pseudo R2	0,04	0,13	0,11	0,02
log likelihood	-2257	-2916	-1810	-922

Sub-sample of men. Regression on the last year of the panel.
Controls: age, age square, marital status, household size, gender, year dummies, volatility.
Volatility is measured as the standard deviation of individual income across all years of the panel.
High volatility is defined as above average

Table 6. The Greater Effect of Reference Income on More Mobile People in the United-States (1974-2000)
Ordered Probit Estimates

	-1	-2	-3	-4	-5	-6
	Happy	**Life exciting**	**Happy**	**Life exciting**	**Happy**	**Life exciting**
Reference Income	0.251***	0.455***	0.203***	0.454***	0.248***	0.454***
	[0.014]	[0.018]	[0.023]	[0.034]	[0.014]	[0.018]
Residual Income	0.161***	0.148***	0.149***	0.148***	0.159***	0.147***
	[0.009]	[0.011]	[0.015]	[0.022]	[0.009]	[0.011]
Upward mobility/parents * Ref Inc.					**0.016*** **	**0.010** **
					[0.003]	[0.004]
Easy to find job*Ref Income			**0.017*** **	**0.023*** **		
			[0.002]	[0.003]		
Observations	31698	21140	12426	6289	31698	21140
Pseudo R2	0,04	0,03	0,04	0,03	0,04	0,03
log likelihood	-28356	-17315	-10644	-4953	-28343	-17312

Controls: age, age square, sex, marital status, number of children, year dummies, find job / mobility dummies.
Easy to find job: « *could respondent easily find an equally good job? very easy/somewhat easy/not too easy* ».
« *Respondent's living standard compared to parents: much better … much worse »,* 5 modalities.
Variables collapsed into 2 categories.

Table 7. Regressions of the Demand for Income Redistribution in Europe (2002)
Ordered Probit Estimates

	All		**Men only**	
	-1	-2	-3	-4
Mobility	**-0.034*** **	**-0.022** **	**-0.038*** **	**-0.033*** **
	[0.010]	[0.010]	[0.010]	[0.010]
Mobility * East		**-0.051*** **		**-0.022***
		[0.011]		[0.012]
Observations	24036	24036	23939	23939
Pseudo R2	0,03	0,03	0,04	0,04
Log likelihood	-28924	-28914	-28620	-28618

Source: *European Social Survey*, 2002.
Controls: age, age square, sex, household size, marital status, household income, occupation, country dummies.
Mobility is measured as the absolute value of the average number of decile change by individuals over the period covered by the data.
Demand for redistribution: "*The government should take measures to reduce the difference in income levels*" Proposed answers from 1= "*agree strongly*" to 5= "*disagree strongly*"

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Annex to Part III. Descriptive statistics

Table A.I ECHP Individual Monthly Wages in PPP

Country	Wave	Mean	Std.Dev	Country	Wave	Mean	Std.Dev	Country	Wave	Mean	Std.Dev
Austria	2	495	673	**Finland**	3	420	529	**Netherlands**	1	552	1051
	3	461	614		4	448	556		2	562	831
	4	481	633		5	497	584		3	596	1005
	5	493	644		6	512	590		4	628	922
	6	501	657		7	562	785		5	713	1124
	7	531	689		8	600	674		6	722	1088
	8	561	737	**France**	1	540	920		7	763	1072
Belgium	1	506	657		2	561	868		8	777	1272
	2	511	665		3	565	861	**Portugal**	1	228	403
	3	517	674		4	552	917		2	241	408
	4	554	711		5	616	926		3	247	410
	5	585	741		6	632	914		4	268	426
	6	596	748		7	644	949		5	274	442
	7	606	749		8	696	1016		6	292	459
	8	664	803	**Ireland**	1	415	691		7	315	499
Denmark	1	548	573		2	456	735		8	343	529
	2	602	609		3	468	730	**Spain**	1	313	588
	3	634	634		4	497	739		2	327	603
	4	703	675		5	550	815		3	335	640
	5	751	701		6	564	810		4	351	652
	6	796	728		7	604	863		5	371	668
	7	850	776		8	652	927		6	396	686
	8	884	793	**Italy**	1	336	547		7	437	739
Germany	1	580	736		2	335	544		8	469	766
	2	610	773		3	335	544	**United Kingdom**	1	527	788
	3	621	779		4	345	560	**(ECHP)**	2	552	785
Greece	1	192	393		5	354	568		3	563	784
	2	196	398		6	368	591	**United Kingdom**	1	572	773
	3	204	416		7	391	625	**(BHPS)**	2	606	808
	4	222	453		8	399	635		3	611	834
	5	236	471	**Luxembourg**	1	942	1258		4	676	908
	6	234	482		2	948	1260		5	717	1064
	7	250	508		3	934	1248		6	749	932
	8	265	527						7	780	930
									8	845	1032

Table A.II ECHP. Satisfaction with Financial Situation*: "Could you indicate on a scale from 1 to 6 your degree of satisfaction for your financial situation?"*

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	57
(%)	Germany	Denmark	Netherlands	Belgium	Luxembourg	France	UK ECHP	Ireland	Italy	Greece	Spain	Portugal	Austria	Finland	UK BHPS
Not satisfied	7	3	2	6	7	7	13	7	10	7	9	8	6	3	2
2	10	5	4	7	7	8	12	9	18	23	17	18	9	7	4
3	19	12	9	17	14	22	20	18	29	35	26	35	13	16	22
4	27	25	23	29	21	32	26	28	28	27	26	34	25	31	40
5	27	35	44	28	34	28	17	22	13	8	19	5	30	32	32
Fully satisfied	10	21	19	13	17	2	11	15	2	1	4	1	16	10	
Total	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Freq	9464	3759	8599	4205	2035	10025	10327	3403	13343	9212	11658	10891	5598	5064	8360

Based on wave 8 (2001) unless not available, in which case based on wave 1 (1994): Germany (1), Luxembourg (5), UK ECHP (7).

Table A.III Russia: Income Categories and Life Satisfaction (RLMS 1994-2000)

Individual monthly income[1]	**Mean**	**Std.dev.**	**Nb observations**	**Life satisfaction (%)**	**Not at all satisfied**	**Less than satisfied**	**Both yes and no**	**Satisfied**
Round 5	167904	227529	4081	Round 5	23	44	20	13
Round 6	314045	508328	4081	Round 6	29	39	21	12
Round 7	396623	769885	4081	Round 7	32	38	20	10
Round 8	483	768	4081	Round 8	38	35	17	10
Round 9	1230	1780	4081	Round 9	24	39	22	15
Total real household expenditure	**Mean**	**Std.dev.**						
Round 5	10949	10275						
Round 6	9121	9372						
Round 7	8156	9688						
Round 8	6042	7200						
Round 9	7020	8107						

Source : RLMS

[1] In 1998 (round 8), a monetary reform divided all prices by 1000.

Life satisfaction : "To what extent are you satisfied with your life in general at the present time?"

Table A.IV Hungary Satisfaction Categories, in % (TARKI Database)

Satisfaction with income	1992	1993	1994	1995	1996	1997
In %						
Not satisfied at all	18	15	11	11	11	11
1	9	9	8	9	9	11
2	11	12	12	14	15	18
3	11	13	13	16	16	16
4	8	10	10	11	11	12
5	19	20	20	20	19	16
6	7	8	9	7	8	7
7	6	6	7	5	6	5
8	6	5	6	4	4	4
Fully satisfied	4	3	3	2	1	1
Total	100	100	100	100	100	100

***Satisfaction variables**: "Please tell me how satisfied you are with. your income? If you are not at all satisfied, give 0; if you are completely satisfied, give 10.*

Table A.V Hungary. Real Financial Categories in Constant Prices

Year	Real household expenditure		Real individual income		Nb Observations
	Mean	**SD**	**Mean**	**SD**	
1992	20948	12676	126076	339102	7265
1993	19805	11386	112117	141032	6674
1994	20175	11287	111236	179577	6220
1995	19044	10692	99458	136663	5493
1996	19633	14551	89484	119508	4807
1997	19651	10791	89325	177487	3778

Table A.VI Poland. Real Financial Categories (Polish Household Panel, 1987-2000)

	Real individual income			Real household expenditure		
	Observations	Mean	Std. Deviation	Observations	Mean	Std. Deviation
1987	3707	152317	137649	3707	159351	95230
1988	3707	174015	172654	3707	168756	119016
1989	3707	193995	200474	3707	169259	180019
1994	4809	739	658	4809	683	434
1995	4809	761	721	4809	689	580
1996	4809	789	727	4809	706	560
1997	3052	1469	1339	3052	1323	1043
1998	3052	1424	1014	3052	1327	887
1999	3052	1433	973	3052	1325	906
2000	3051	1405	1063	3051	1320	943

In constant zlotys of the first year of each period. A change in currency unit happened in 1994.

Table A.VII Poland,: *"How do you Evaluate your Current Financial Situation?"*
(Polish Household Panel, 1987-2000)

In %	1987	1988	1989	1990	1994	1995	1996	1997	1998	1999	2000
Very bad	1,1	0,6	1,2	1,5	6,8	5,5	5,0	11,4	11,2	14,1	14,6
Bad	11,9	10,7	14,3	15,4	30,5	26,9	26,6	21,7	21,7	23,0	23,2
Normal	63,2	65,4	66,2	66,3	52,8	55,8	56,5	57,1	56,7	53,0	52,9
Good	22,4	22,3	17,7	16,3	9,5	11,4	11,3	9,5	10,2	9,6	9,0
Very good	1,4	1,1	0,7	0,6	0,4	0,5	0,6	0,2	0,3	0,4	0,4

Table A.VIII Baltic Countries (NORBALT 1999 Household Survey)

		Estonia	Latvia	Lithuania
Economic Satisfaction (%)		**Estonia**	**Latvia**	**Lithuania**
1		7	9	8
2		22	33	33
3		59	51	55
4		11	7	4
5		0	0	0
Total		100	100	100
Real individual income in constant Euros		**Estonia**	**Latvia**	**Lithuania**
	mean	183	144	125
	sd	178	178	120
Number observations		4532	2801	2397

***Economic satisfaction**: "Considering the total economic situation of your household, please tell me which of the following statements best describes your situation: 1. we feel we are among the well-off in Estonia (Latvia, Lithuania), 2. we are not rich but we manage to live well, 3. we are neither rich nor poor, 4. we are not poor but on the verge of poverty, 5. we are poor".*

Table A.IX American General Social Survey

	Real individual Income in Constant $		Life is :					Respondent is :					Number observations
Year	**Mean**	**Std. Dev**	**Year**	**dull**	**routine**	**exciting**	**Total**	**In %**	**not too happy**	**pretty happy**	**very happy**	**Total**	
1972	28389	20552	**In %**					1972	16,5	53,2	30,3	100	1613
1973	31362	22397	1973	5,1	49,4	45,5	100	1973	13,1	51,1	35,9	100	1504
1974	32125	23988	1974	4,7	51,8	43,5	100	1974	13,1	49	37,9	100	1484
1975	29404	22256					100	1975	13,1	54,1	32,9	100	1490
1976	28274	21368	1976	3,7	51,6	44,8	100	1976	12,5	53,4	34,1	100	1499
1977	32641	29325	1977	6,8	48,9	44,4	100	1977	11,9	53,2	34,8	100	1530
1978	30178	25723						1978	9,6	56,1	34,3	100	1532
1980	31333	27256	1980	5,6	48,4	46	100	1980	13,3	52,7	33,9	100	1468
1982	24546	20668	1982	6,6	50,2	43,1	100	1982	14,5	54,9	30,6	100	1860
1983	30693	29432						1983	12,8	56,1	31,2	100	1599
1984	28299	24026	1984	5	48,2	46,8	100	1984	12,9	52,3	34,7	100	1473
1985	30434	27736	1985	6,5	45,6	47,9	100	1985	11,4	60	28,6	100	1534
1986	28539	25023						1986	11,4	56,3	32,3	100	1470
1987	28110	23270	1987	4,6	51,5	44	100	1987	13,4	57,5	29,1	100	1819
1988	28917	23953	1988	5	50	45,1	100	1988	9,3	56,8	34	100	1481
1989	30969	24889	1989	5,3	50,2	44,5	100	1989	9,7	57,7	32,6	100	1537
1990	33096	29715	1990	5	50,1	45	100	1990	9	57,6	33,4	100	1372
1991	26911	21661	1991	4,2	51,5	44,3	100	1991	11	58	31,1	100	1517
1993	32577	30568	1993	6,5	47,1	46,5	100	1993	11,1	57,3	31,6	100	1606
1994	31136	26879	1994	4,2	48,4	47,4	100	1994	12,2	59	28,8	100	2992
1996	31991	27299	1996	4,2	45,9	50	100	1996	12,1	57,5	30,4	100	2904
1998	30558	26556	1998	5,5	49,4	45,1	100	1998	12,1	56,1	31,8	100	2832
2000	33227	33941	2000	4,9	48,7	46,4	100	2000	10,6	57,7	31,7	100	2817
2002	34930	35834	2002	3,7	44,2	52,1	100	2002	12,4	57,3	30,3	100	2765
			Mean	**5,1**	**49**	**45,9**	**100**	**Mean**	**12,1**	**55,9**	**32,1**	**100**	**43698**

Table A X. Ratio of |Residual Income*100 / Reference Income

	Obs	Mean	Std. Dev.
Baltic	17769	9,57	9,36
Russia	13692	8,89	9,03
Poland 87-90	14722	4,74	3,55
Poland 94-96	14400	6,19	5,69
Poland 97-00	9507	5,30	5,57
Hungary	24863	19,80	28,08
ECHP all	322156	3,35	3,60
Austria	19416	3,38	4,11
Belgium	13532	2,62	2,87
Denmark	16297	2,54	3,12
Finland	1288	2,85	3,17
France	36101	3,60	3,69
Germany	12651	4,00	4,03
Greece	19269	3,40	3,35
Ireland	16367	3,54	3,16
Italy	3638	2,85	2,97
Luxembourg	2676	3,05	3,25
Netherlands	29534	3,13	4,25
Portugal	32982	3,75	4,27
Spain	3405	3,50	3,18
United Kingdom BHPS	30161	3,67	3,37
GSS			
year			
1974	1235	9,78	7,30
1975	1271	10,41	7,92
1976	1261	9,47	6,89
1977	1298	9,10	6,89
1978	1318	9,84	7,42
1980	1243	8,97	7,05
1982	1563	8,95	6,81
1983	1356	9,82	7,55
1984	1268	9,69	7,07
1985	1344	9,33	7,23
1986	1267	9,33	7,15
1987	1584	8,98	6,75
1988	1281	8,89	6,77
1989	1296	9,03	6,86
1990	1165	9,57	7,60
1991	1286	8,93	6,73
1993	1394	8,94	6,88
1994	2520	8,68	6,71
1996	2456	8,51	6,70
1998	2349	8,38	6,66
2000	2297	8,65	7,04

Table A.XI. Mobility Indices in Transition and Stable Market Economies

Mean of the Square Number of Deciles Change since Previous Year (Real Individual Income)

	Average square decile change
ECHP	**Mean 1994-2001**
Germany	2.75
Denmark	3.11
Netherlands	2.04
Belgium	2.88
Luxembourg	1.90
France	1.70
United Kingdom ECHP	3.17
Ireland	1.93
Italy	3.12
Greece	3.17
Spain	3.05
Portugal	2.62
Austria	2.29
Finland	1.76
UK BHPS	2.23
Poland	**Yearly**
1988	1.94
1989	1.80
1990	3.53
1995	4.55
1996	4.43
1998	4.84
1999	4.33
2000	3.92
Hungary	
1993	6.95
1994	7.35
1995	6.40
1996	5.89
1997	6.44
Average 1992-1997	**6.61**
Russia	
1996	8.79
1997	11.03
1998	12.70
1999	10.79
Average	**10.83**

UK data based on the BHPS, waves 1-8, Germany waves 1-3, Denmark waves1-8, Netherlands waves 1-8, Belgium wave 1-8, Luxembourg waves 1-3, France waves 1-8, UK, ECHP, waves 1-3, Ireland waves 1-8, Italy waves 1-8, Greece waves 1-8, Spain waves 1-8, Finland waves 3-8. Based on real individual income in PPP.

Table A.XII Some Tax Rates in European Countries in 2003-2004 (%)

	1	2	3	4
	Top tax rate	Top tax rate starts with a taxable income of	Standard marginal charges on profits of corporations	Normal VAT
Austria	50	50870	34	20,00
Denmark	59		30	25
Belgium	56,42	43870	34	21
Finland	52,8	55200	29	22
France	57,58	47131	35,4	19,6
Germany	51,17	55008	40	16
Greece	51,17	23400	37.5	18
Ireland	42	28000	12,5/10	21
Italy	46,15	70000	34	20
Luxembourg	38,95	34500	30,4	15
Netherlands	52	49464	34,5	19
Portugal	40	52276	33	17
Spain	45	45000	35	16
Sweden	57	46812	28	25
UK	40	43543	0-30	17,5
Average	**49,28**		**32,87**	**19,47**
Bulgaria			23.5	20
Czech republic	35	31148	28	22
Estonia			0/26	18
Hungary	40	5119	16	25
Latvia	25		15	18
Lithuania	33		15	18
Poland	40	16690	19	22
Romania			25	19
Slovakia	38	13492	19	20
Slovenia	50	35916	25	20
Average	**35.16**		**19.6**	**20,2**

(1) top tax rate: central government + local government + surcharge on social taxes when relevant.

(2) (3) : Estonia: reinvested profits are not taxed.

Source: Ifo's Database for Institutional Comparisons in Europe (DICE). http://www.cesifo.de/ and European Commission quoted from DREE: http://www.dree.org/elargissement.

Table A.XIII Gini Indices in Post-Transition Europe

	Year	Gini
Bulgaria	1978	26
Bulgaria	1996	29
Czech Republic	1989	19
Czech Republic	1997	28
Estonia	1981	25
Estonia	1997	34
Hungary	1989	23
Hungary	1997	32
Latvia	1991	25
Latvia	1997	34
Lithuania	1989	26
Lithuania	1996	35
Poland	1989	28
Poland	1996	33
Romania	1989	16
Romania	1997	36
Russian Federation	1989	27
Russian Federation	1997	41
Slovak Republic	1989	18
Slovak Republic	1997	23
Slovenia	1990	24
Slovenia	1997	30

Source: WIDER World Income Inequality Database (www.wider.unu.edu/wiid/)