INCOME INTERACTIONS IN THE "OLD" EUROPE VERSUS THE "NEW" EUROPE AND THE UNITED STATES*

November 4, 2004

Claudia Senik

(DELTA and University Paris-IV Sorbonne)

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.

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

* I thank Jean-Olivier Hairault and Andrew Clark for useful comments. This research has benefited from the support of a grant from CNRS (ATIP), the MIRe-DREES and funds from the 5th PCRD of the European Union (HPSE-CT-2002-00149). I thank Christophe Starzec for the Polish data, Mihails Hazans for the Baltic data, and the *Banque de Données Socio-Politiques* in France for the *General Social Survey* series. The usual disclaimer applies

I. 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). The paper covers two dimensions of the question. The first is attitudes towards income inequality in general, i.e. the distribution of aggregate income. Motivations in this context typically include risk-aversion, pure preferences for income equality (similar to an aesthetic taste), efficiency concerns, prospects for upward (or downward) mobility, and norms of reciprocity. 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?

Both notions of inequality aversion (or love) cover two different types of social interactions (see Manski and Straub [2000]): direct interactions on the one hand, and indirect, informational, interactions on the other hand. It is important to disentangle these two types of attitudes, as 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]).

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. This paper 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, we ask how the income of one’s professional peers affects individual well-being, as measured by subjective satisfaction variables[1]. We show that the effect is negative in “old” European countries, whereas it is positive in post-Transition economies and in the United States. We 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 and the United States on one side, and “old Europe” on the other side. We relate these findings with the degree of perceived income mobility in these economies.

The next section presents the empirical strategy. Section III presents and discusses the results; Section IV concludes.

II. Empirical Strategy

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*[2]. 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.

Here, we identify the effect of reference income using 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, we 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).

More precisely, we 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, our panel data include both the pre-transition (1987-1990) and post-transition (1994-2000) periods. This allows us 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, we 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), we test whether an increase in reference income is associated with individual satisfaction or dissatisfaction.

Our empirical tests follow the structure suggested by Hirschman [1973]: consider a society composed of two individuals (or groups of individuals). The 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:

$$\delta V / \delta Y^B = (\delta V / \delta E^A \,.\, \delta E^A / \delta Y^B) + V_1 \qquad (1).$$

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. We interpret the sign of $\delta V / \delta Y^B$ as a test of the relative importance of these two effects. A negative sign implies that the comparison effect V_1 is negative and dominates the information effect ($\delta V / \delta E^A \,.\, \delta E^A / \delta Y^B$); a positive sign suggests that the information effect[3] dominates.

Our strategy is to use satisfaction variables as proxies for individual well-being and to relate them to the variation in individuals’ reference income (standing for Y^B), defined via professional categories on the labor market.

In a later stage, 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], we 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.

1. Data

Our choice of databases is restricted by the requirement that they include satisfaction variables and, if possible, be panel[4]. For "Western" European countries, we 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[5] (919000 observations). We also use an additional separate larger database with 90000 observations, the French component (same years), provided by the national statistical office (INSEE). Details of the ECHP are available at http://forum.europa.eu.int/irc/dsis/echpanel/info/data/information.html.

Concerning the "Eastern" part of the sample, we 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**, we use rounds 5 to 9 (1994-2000) of the *Russian Longitudinal Monitoring Survey*, a representative stratified sample of Russian dwelling units that includes 11130 individuals. Information about the *RLMS*, including the data itself, is available at http://www.epc.unc.edu/projects/rlms. For **Hungary**, we use the TARKI *Hungarian Household Panel*, the best Hungarian source to date regarding subjective satisfaction data. The survey runs from 1992 to 1997 (6 waves) with 8237 individuals. Information about the TARKI survey are available at www.tarki.hu. To the best of our knowledge, there is no panel survey of **Baltic** households including subjective data. We 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. Information on the project is available at http://www.fafo.no/norbalt. For **Poland**, we 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. We 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 were of too poor quality to be used.

Concerning the United-States, we 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 to our knowledge, there is not American panel data that would include the needed information together with a satisfaction question.

Lastly, we 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. Information about the survey, including the data itself is available at http://www.europeansocialsurvey.org. Descriptive statistics of all databases are presented in the Appendix.

2. A Two-Stage Estimation Strategy

Our method comprises two stages. In the first stage, we 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 with the same productive characteristics. We do this for two reasons: first, people with the same skills and occupation offer a natural benchmark for comparison; second, 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.

We 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). We run this estimation over the whole sample of individuals. We whose to exclude 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, we 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.

In the second stage, we include predicted individual income in a well-being equation. Hence, we regress satisfaction variables on objective socio-demographic variables together with the estimated reference income. We try to use a general satisfaction measure as our dependent variable, in order to cover all of the possible effects related to the dynamics of expectations and aspirations [Senik, 2004]. Depending on the dataset, we 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, we 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). We 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. We 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 the implementation of 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, we estimate conditional fixed effect logit models[6]. 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], we consider that, even so, this is a price worth paying for controlling unobserved individual heterogeneity.

As our main interest lies in the influence of reference income, it is important to control for actual 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 macroeconomic shock). To deal with this, we include lagged individual income (or expenditure) in the regression instead of current income. When this variable is not available, because the data is not panel, we control for household income or expenditure. As is often the case, we use the natural logarithm of income: in the particular case of our model, this reflects concavity of the utility function. The individual welfare function we estimate hence depends on lagged current real individual income, the individual reference group's income and time varying socio-demographic characteristics.

III. 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, we run robustness tests to ascertain the cognitive effect of reference income as a function of the uncertainty faced by agents. A summary table of the main results[7] is presented in Table I.

1. Information Effects are Dominant in Post-Transition Countries

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. Here, we add new results based on conditional fixed effects logit models (Table II). All regressions show the positive influence of reference income on life satisfaction. The interaction between reference income and a positive answer to the question whether the respondent is "*concerned that she might lose her job*", or "*concerned about getting the bare essentials*" is positive (columns 2 and 3 of Table II): the informational effect is stronger for individuals facing greater uncertainty.

In **Hungary** too, reference income exerts a positive influence on various categories of individual satisfaction, i.e. on satisfaction with income, with future perspectives, with life, and with standard of living; it also improves financial expectations (Table III.A). The coefficient of reference income is positive although it is not significant for some satisfaction variables. During the first wave of the survey (1992), a question related to risk-aversion was asked "*do you think that a good job is: a secure job or a well-paying job?"*. Panel A of Table III.B shows that the interaction of this variable with reference income attracts a positive sign in the regressions of future expectations and assessment of one's standard of living. The effect of reference income is also stronger for people who believe that "*the situation of the country will worsen in the next 12 months*" (Panel B of Table III.B), hence who are more worried about the future. As for Russia, we check that the positive impact of reference income is higher for younger people, i.e. under the age of 41 (Panel A in Table III.C) and 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 (Panel B of Table

III.C). In summary, Hungarian data support the interpretation of reference income as a source of information: more uncertain or uncertainty-adverse people give a higher value to the information conveyed by reference income.

The results pertaining to the **Baltic countries** are consistent with this assertion. Reference income exerts a positive influence on many satisfaction variables: satisfaction with economic situation over the past 12 months, 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 (Panel A of Table IV), or separate by country (Panel B of Table IV). As the data is not panel, we cannot check that these results hold in fixed effects regressions.

The most spectacular results are obtained with **Polish data** (Table V). Up to 1990, Poland was still a Socialist regime (with 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, we built an index of mobility, defined as the average square change in deciles compared to the previous year (see Atkinson, Bourguignon and Morrisson, [1992] for a discussion of this indicator). The order of magnitude of this index rises from about 2 before 1990, to about 4.5 afterwards (Table A.XI in the Annex). There thus seems to be a sharp evolution between 1987-1989 and the latter period. To take this into account, we run the regression of income satisfaction for the sub-period 1987-1989, leaving year 1990 aside. Using conditional fixed effects logit

models, we obtain a negative sign for the coefficient of reference income in the panel 1987-1989, and a positive coefficient for the two subsequent panels (Table V, Panel A). We interpret this contrast between the sub-periods of the Polish panel as a powerful illustration of the fact that reference income provides information when instability rises. As for other countries, we check that, for the period 1994-2001, this cognitive effect is stronger for those who experience higher income volatility (Panel B of Table V) as well as for younger people (Panel C of Table V).

2. Comparisons Effects are Dominant in Stable European Countries

We now turn to the analysis of stable European countries. Our prior is that the sign of the reference income will be negative, as in Clark and Oswald [1996][8] because comparison effects dominate information effects. We use the financial satisfaction variable, which initially contains 6 modalities and has been collapsed into two categories, dividing the population in two approximately equal parts. All the conditional fixed effects regressions confirm our prior, except in Finland[9], where reference income attracts a positive coefficient (Table VI.A).

We also use French data for which we have more observations, more subjective variables (and better knowledge) from a separate French source (INSEE), in order to have a closer look at this result (Table VI.B). Satisfaction decreases with reference income. This is true not only for satisfaction with financial situation, but also for 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*" (columns 1, 2 and 3 of Table VI.B). In line with our prior, this comparison effect is attenuated for individuals in the upper part of the reference group (column 5):

comparisons are more effective upwards. A similar asymmetric result was obtained by Ferrer-i-Carbonnell (2004) with German data. Another noticeable result is that the probability to declare that "*the time is favorable for large expenditures*" increases with reference income (column 4). This can be interpreted as a confirmation of the comparison effect, and complementary "keeping up with the Jones" behavior: when my group of peers gets richer, I feel compelled to keep pace with the increase in their (conspicuous) consumption.

3. 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 are asked in the survey) increases with the income of one's professional peers (Table VII.A)[10]. Hence, if Americans make income comparison, it is not within their professional group, but rather relatively to other groups. This may be related to the idea that the United States is a more mobile 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. In other words, competition seems to take place between groups rather than among professional groups.

The effect of reference income is 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 VII.A).

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, we find that when respondents declare that their living standard is higher than that of their parents, the effect of reference income is stronger (columns 5 and 6 in Table VII.A).

This is conform to the findings by Corneo and Gruner [2000] that status, or more precisely “between groups social rivalry effects” play a role in the demand for redistribution in the United States. This result is strengthened by the observation that introducing prestige scores in the regression reduces the effect of reference income by two thirds, without affecting much the effect of actual household income (column 3 and 4 of Table VII.B). The same is true of “self-ranking of social position” (a variable coded from 1 to 10) as shown by columns 5 and 6, and of “subjective class identification” (*lower class*/*working class*/ *middle class*/*upper class*, see columns 7 and 8). The feeling that “respondent has the opportunity to advance” completely neutralizes the effect of reference income on happiness, but not the feeling that “life is exiting” (columns 11 and 12). Lastly, the opinion of the respondent concerning his family income (5 modalities: from *far below average* to *far above average*) essentially reduces the effect of actual real income rather than that of reference income (columns 9 and 10). Hence, the notion of relative social position is partly substitute for the reference income in the satisfaction equation, which suggests that indeed, individuals are taking the income of their professional group in a cognitive manner, as a measure of their own place in the hierarchy of incomes. Instead of comparing to their peers, as West-Europeans do, they identify with them and compare to other social groups.

These results differ from those of Blanchflower and Oswald [2004] and Luttmer [2004]; this is certainly because the authors use different notions of reference income.

The former consider 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.

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

So far, we have shown that in post-Transition countries and in the United-States, other people's income is used as a source of information rather than as a benchmark for comparison. By contrast, in Western Europe, comparison effects are dominant. We claim that this has to do with the perceived economic environment. Americans and East-Europeans[11] perceive a higher degree of mobility (and uncertainty for the latter), which gives a higher value to information as compared to comparison. Of course mobility is not equivalent to uncertainty; however, both can have the effect of neutralizing the aversion of people to inequality, i.e. of 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 inequality and income redistribution is concerned? Alesina et al. [2000, 2004] already showed that the demand for income redistribution is decreasing with perceived mobility and equality in opportunities, and that Europeans are much more inequality-adverse than Americans. We now check that the divide also exists inside Europe.

We use the newly issued *European Social Survey* database that surveys 21 countries of the European Union, including four "Eastern" formerly Socialist countries. This survey

contains a series of attitudinal question, including a "demand for redistribution" question: "*Do you agree that the government should take measures to reduce the difference in income levels? "* (1= "*agree strongly*" to 5= "*disagree strongly*"). We regress the answer to the demand for redistribution 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 VIII). It is a robust result that the coefficient on this "East" dummy is significantly negative (Panel A).

Further, we build income mobility indicators, using the 8 waves of the ECHP panel, plus our separate data for Hungary and Poland (Table AXI in the Annex). We plug these indicators into the *ESS* database, and we regress the demand for redistribution variable of *ESS* on these indicators together with the usual socio-economic controls. We find (Panel B of Table VIII) 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.

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 Transition countries (column 1, Table A.XII in the Annex). Taxes on profits (column 2) are also much lower in 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[12] as the "old Europe". Our 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.

IV. Conclusions

Using mostly panel data, with over one million observations, we 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.

We also show that the demand for redistribution is lower in Eastern countries and we 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 Eastern Europe 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[13], even though this seems to be the belief of the inhabitants.

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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Claudia Senik

DELTA, ENS

48, bd Jourdan

75014 Paris, France

Tel: 33-1-43-13-63-12
Fax: 33-1-43-13-63-10
E-mail: Senik@delta.ens.fr
Web: http://www.delta.ens.fr/senik

Endnotes

[1] 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.

[2] See Senik [2005, forthcoming] for more references.

[3] 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.

[4] 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.

[5] 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.

[6] 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, we use ordered probit models.

[7] For lack of space, we 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.

[8] Our results on British data (columns 2 and 9 of Table 9) are indeed consistent with Clark and Oswald’s. Note that column 2 is based on the BHPS data, harmonized *ex post* with ECHP categories, which include 8 waves. Column 9 is based on the 3 waves of the genuine ECHP survey of British household; as the regression includes one lagged variable, we believe that the coefficient in column 9 is insignificant due to the small sample size.

[9] Finland is a country where important restructuring and reforms have taken place starting in 1991 [Daveri and Silva, 2004]; to a certain extent, this makes it close to transition countries.

[10] For space constraints, we present the result of the regression on the pooled data (1972-2001) including year dummies, but we have checked that the result holds when we perform the regression year by year.

[11] 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).

[12] 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.

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

Table I. Summary of the Main Results

Table I.A Fixed Effects Logits Unless not Panel

	Financial satisfaction	Life satisfaction	Life is exciting	Sat.isfaction with Future Perspect.	Happiness	Satisfaction with Living standard	Expect. Situation to improve	Support inequality
Russia		+						
Hungary	+	+		+		+	+	
3 Baltic countries	+						+	+
Poland 1987-1989	-							
Poland 1994-2001	+							
USA 1973-2000		+	+		+			
14 European Countries ECHP 1994-2001	-							
France	-							

Table I. B Ordered Probit Regressions for Robustness Tests in Post-Transition Europe and in the USA

	Russia	Hungary	Poland 1994-2001	United States
RI*income volatility	+	+	+	
RI*Young	+	+	+	
RI*Afraid of losing Job	+			
RI*afraid of not making ends meet	+			
RI*prefer secure job		+		
RI*expect degradation of family finance		+		
RI*easy to find job				+
Reference income *upward mobility/parents				+

Additionally, in the **United-States**, reference income is substitute with: the prospect of professional promotion, the subjective relative position of family finance, subjective class identification, respondent's self ranking social position, job prestige index.

Table II. Russia. The Positive Effect of Reference Income and Robustness Tests. Life Satisfaction. Conditional Fixed Effects Logits.

	1	2	3
Reference Income	0.242***	0.201***	0.323***
	[0.078]	[0.087]	[0.059]
(afraid of losing job)*Reference Income		0.029***	
		[0.010]	
(afraid/necessities)* Reference Income			0.158***
			[0.009]
Observations	11741	6067	11756
Number of persons	2473	1391	2466
Pseudo R2	0.01	0.01	0.05
log likelihood	-4492	-2314	-4350

***Source**: Russian Longitudinal Monitoring Survey.* **Other controls**: household size, log household expenditure and dummies for "afraid of losing your job" in column (2) and "afraid of not getting basic necessities" in column (3). Reference income is estimated log individual income in constant roubles. Bootstrapped standard errors with 1000 iterations for the log reference income main effect and interactions.

Table III. A Hungary. The Positive Effect of Reference Income on Satisfaction. Conditional Fixed Effects Logits.

	1	2	3	4	5
	Sat. with income	Sat with future perspectives	Sat. with living standard	Satisfaction with life	Expectations for family finance
Reference Income	0.240***	0.027	0.042**	0.017	0.008
	[0.026]	[0.021]	[0.021]	[0.022]	[0.020]
Observations	8562	9849	9693	9066	11444
Number of case	2188	2490	2399	2306	2839
Pseudo R2	0.01	0.01	0.01	0.01	0.01
log likelihood	-3230	-3780	-3720	-3457	-4432

***Source:** TARKI.* **Controls**: lagged log individual income, marital status, household size. Reference income is the estimated value of log real individual income. Bootstrapped standard errors for reference income, main effect and interactions (1000 replications).

***Satisfaction variables**: "Please tell me how satisfied you are with the following things. If you are not at all satisfied, give 0; if you are completely satisfied, give 10. How satisfied are you with: 1. your future opportunities (column 2). 2. your standard of living (col 3). 3. your income (col. 1), 4. life up to now, the course of your life (col. 4)?". These variables have been collapsed into two categories, dividing the population in two approximately equal parts.*
***Expectations** (col. 5): "How do you think that the financial position of your family will change in the next 12 months: 1. will improve considerably, 2. will improve, 3. will not change, 4. will get worse, 5. will get much worse." This variable has been collapsed into two categories, dividing the population in two approximately equal parts.*

Table III.B Hungary. The Greater Effect of Reference Income for Risk Averse and Pessimist Persons Ordered Probit Estimates.

Panel A	1	2	3	4	Panel B	1	2	3	4	5
	Satisfaction with income	Satisfaction with future	Satisfaction with living standard	Satisfaction with life		Expectations	Life satisfaction	Income satisfaction	Satisfaction with living standard	Satisfaction with future
Reference Income	0,187***	0,033*	0,025	0,054***	Reference Income	0,036***	0,074***	0,126***	0,044***	0,063***
	[0.022]	[0.017]	[0.020]	[0.017]		[0.006]	[0.006]	[0.007]	[0.006]	[0.006]
Prefer secure job* reference income	-0.031	0.029*	0.042**	0.022	Expect sit. to worsen	-1.955***	-0.332***	-0.256***	-0.483***	-0.476***
	[0.022]	[0.017]	[0.020]	[0.017]		[0.081]	[0.072]	[0.098]	[0.074]	[0.070]
Prefer secure job	0.244	-0.564***	-0.662***	-0.412**	**Expect sit. to worsen *reference income**	0.024***	0.017***	-0,003	0.017**	0,01
	[0.254]	[0.188]	[0.225]	[0.190]		[0.007]	[0.007]	[0.009]	[0.007]	[0.006]
Observations	4505	4508	4671	4594	Observations	17309	16504	14894	16821	16605
Pseudo R2	0.03	0.01	0.02	0.02	Pseudo R2	0,2	0,02	0,02	0,02	0,03
Log likelihood	-9604	-9814	-9859	-9280	Log likelihood	-16413	-33513	-31605	-35435	-35389

Source:** TARKI**.
***Panel A**: Controls: year, marital status, log real household income, household size, sex, age age squared, religion. Round 1 only. Reference income is the estimated value of log real individual income. Bootstrapped standard errors for reference income, main effect and interactions (1000 replications).*
***Prefere secure job**: "Do you think that a good job is a secure job or a well-paying job?- a secure job, - a well-paid job." Available only for round 1. **Satisfaction variables** and **Expectations** defined as in Table 2.a.*
***Panel B**: Controls: year, marital status, lagged individual income, household size, sex, age, age squared, religion. Reference income is the estimated value of log real individual income. The variance-covariance matrix of estimators is adjusted for the fact that observations relating to the same individuals are not independent. Robust standard errors in brackets.*
***Expect situation to worsen**: "How do you think the financial situation of the country will change in the next 12 months? 1. it will improve considerably, 2. will improve, 3. will not change, 4. will get worse, 5. will get much worse.". This variable has been collapsed into two categories: "-will improve, -will worsen", dividing the population in approximately two equal parts. **Satisfaction variables** and **Expectations** defined as in Table 2.a.*

Table III.C Hungary. The Greater Effect of Reference Income for those with Higher Income Volatility and the Young Ordered Probit Estimates.

	1	2	3	4	5		1	2	3	4	5
	Expectations	Satisfaction with life	Satisfaction with income	Satisfaction with living standard	Satisfaction with future		Expectations	Life Satisfaction	Income Satisfaction	Satisfaction with living standard	Satisfaction with future Perspectives
Reference income	0.013***	0.065***	0.112***	0.035***	0.054***	Reference income	0.023***	0.064***	0.100***	0.040***	0.052***
	[0.005]	[0.004]	[0.005]	[0.004]	[0.004]		[0.005]	[0.005]	[0.005]	[0.005]	[0.005]
Young*RI	0.017***	0.012***	0.024***	0.017***	0.017***	**High volatility*RI**	0.007	0.047***	0.055***	0.035***	0.043***
	[0.003]	[0.002]	[0.003]	[0.002]	[0.002]		[0.007]	[0.007]	[0.008]	[0.007]	[0.007]
						High volatility	0.011	-0.345***	-0.418***	-0.241***	-0.310***
							[0.079]	[0.078]	[0.095]	[0.079]	[0.080]
Observations	19059	18514	16654	18843	18498	Observations	19057	18511	16652	18840	18495
Pseudo R2	0.03	0.01	0.02	0.01	0.02	Pseudo R2	0.040	0.020	0.020	0.020	0.020
log likelihood	-24241	-37882	-35556	-40157	-39854	log likelihood	-24154	-37636	-35435	-39901	-39689

Source: *TARKI.*
Controls*: age, lagged individual income, household size, sex, religion, year, marital status.*
Reference income is the estimated value of log real individual income. Bootstrapped standard errors for reference income, main effect and interactions (1000 replications). The variance-covariance matrix of estimators is adjusted for the fact that observations relating to the same individuals are not independent. Robust standard errors in brackets.

Panel A*: **Young** is defined as under the age of 41. **Satisfaction variables** and **Expectations** defined as in Table 2.a.*

Panel B*: **High volatility**: dummy indicating whether the standard deviation of real individual income over time is greater than the national mean. **Satisfaction variables** and **Expectations** defined as in Table 2.a.*

Table IV. Baltic Countries. Economic Satisfaction and Reference Income. Ordered Probits

Panel A	1	2	3	**Panel B**	1	2	3	4	5	6	7	8	9
	Panel A: All three countries together				**Panel B: Regression country by country**								
					Estonia			**Latvia**			**Lithuania**		
	Economic satisfaction	Expectations	Pro-inequality		Economic satisfaction	Expect.	Pro-Inequality	Economic satisfaction	Expect.	Pro-inequality	Economic satisfaction	Expect.	Pro-Inequality
Reference income	0.105*	0.235***	0.166***	Reference income	0.433***	0.301***	0.150*	0.159*	0.225**	0.104	0.235*	0.307*	0.300*
	[0.054]	[0.062]	[0.062]		[0.076]	[0.087]	[0.084]	[0.094]	[0.108]	[0.114]	[0.135]	[0.160]	[0.158]
Observations	5524	4267	5340	Observations	2731	2063	2655	1640	1284	1608	1228	978	1151
Pseudo R2	0.13	0.1	0.03	Pseudo R2	0.09	0.07	0.03	0.08	0.05	0.02	0.09	0.04	0.02
log likelihood	-4923	-4176	-4281	log likelihood	-2507	-2019	-2356	-1633	-1314	-1197	-1046	-891	-797

Source: *NORBALT II.*

Controls*: sex, number of children, household size, marital status, age, age squared, employment status, log household income + country dummies in Panel A. Reference income is estimated log individual income in Euros.*

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".*

Expectations*: "Looking 5 years into the future, do you believe that the economic situation of your household will be better, the same or worse than it is today? 1. better, 2. the same, 3. worse".*

Pro-inequality*: "There are varying opinions about the different income groups within Latvia (Lithuania, Estonia). What do you think about the income differences in this country in general? 1. the differences between the groups should be much smaller, 2. the differences between the groups should be slightly smaller, 3. the existing differences are acceptable, 4. the differences between the groups should be slightly greater, 5. the differences between the groups should be much greater".*

Table V. Poland. The Effect of Reference Income Becomes Positive with Transition. Financial Satisfaction. Conditional Fixed Effects Logits.

Panel A	1	2	3	**Panel B**	1	2	**Panel C**	-1	-2
	Conditional fixed effects logits				Ordered probits			Ordered probits	
	1987-1989	1994-1996	1997-2000		1994-1996	1997-2000		1994-1996	1997-2000
Reference income	2,287*** [0.053]	2,287*** [0.784]	1,524 [0.453]	**Reference income**	1,673*** [0.809]	1,487*** [0.578]	Reference income	1,315*** [0,052]	1,138*** [0,060]
				RI*volatility	1.774* [0.978]	0,743 [0.620]	**RI*young**	0,012* [0,007]	0,035*** [0,008]
Observations	974	1966	1354	Observations			Observations	9618	6104
Number individuals	487	983	677	Number of individuals	983	1064			
Pseudo R2	0.09	0.02	0.02	Pseudo R2	0,03	0,02	Pseudo R2	0,1	0,1
Log likelihood	-331	-664	-460	Log likelihood	-662	-1142	Log likelihood	-9544	-6440

Source: *Polish Household Survey***.**

Panel A*: **Controls**: marital status, lagged log household expenditure, household size. All financial categories in constant prices of the first year of the period. Reference income is estimated log individual income in constant zlotys. Bootstrapped standard errors for reference income, main effect and interactions (1000 replications).*
Financial situation *as in Table 4.a.*

Panel B and C*: **Controls**: age, age square, marital status, lagged log household expenditure, household size, year dummy. All financial categories in constant prices of the first year of the period. Bootstrapped standard errors for reference income, main effect and interactions (1000 replications).*
Financial situation *as in Table 4.a.* ***Young*** *is defined as under the age of 41.*

Table VI.A Europe. Reference Income is a Comparison Income. Conditional Fixed Effect Logit Estimates of Financial Satisfaction

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	All	UK BHPS	Germany	Denmark	Netherlands	Belgium	Luxembourg	France	UK ECHP	Ireland	Italy	Greece	Spain	Portugal	Austria	Finland
Reference income	-0.020***	-0.016**	-0.077***	-0.021**	-0.059***	-0.005	-0.056	-0.021*	0.001	-0.055***	-0.014*	0.020*	-0.035***	-0.021**	-0.087***	0.021**
	[0.003]	[0.008]	[0.042]	[0.011]	[0.011]	[0.009]	[0.855]	[0.012]	[0.032]	[0.019]	[0.008]	[0.011]	[0.011]	[0.012]	[0.020]	[0.011]
Observations	250021	23133	5925	9483	14276	10848	981	25150	4129	12671	36266	24200	31178	30132	11672	9977
Number of id	46207	3742	2092	1697	2567	1869	341	4350	1512	2552	6179	4087	5861	4929	2193	2236
Pseudo R2	0.01	0.02	0	0.01	0.03	0	0	0.01	0.01	0.01	0.01	0.03	0.01	0.01	0.01	0.02
Log likelihood	-97094	-8966	-2149	-3522	-5203	-4191	-357	-9893	-1488	-4895	-14381	-9408	-12361	-11846	-4501	-3743

***Source**: ECHP*. Column (2) UK data based on BHPS, waves 1-8, (3) Germany waves 1-3, (4) Denmark waves 1-8, (5) Netherlands waves 1-8, (6) Belgium wave 1-8, (7) Luxembourg waves 1-3, (8) France waves 1-8; (9) UK, ECHP, waves 1-3, (10) Ireland waves 1-8, (11) Italy waves 1-8, (12) Greece waves 1-8, (13) Spain waves 1-8, (14) Finland waves 3-8.

Controls: lagged log household income in PPP. All incomes are converted into PPP. Reference income is estimated log individual wage in PPP. Bootstrapped standard errors for reference income (1000 replications).

***Satisfaction with financial situation**: "Could you indicate on a scale from 1 to 6 your degree of satisfaction of your financial situation?"*.

Table VI.B Relative Income in France. Conditional Fixed Effect Logits.

	1	2	3	4	5
	Satisfaction with financial situation	Financial situation improved	Resources sufficient to live	Time for consumption	Satisfaction with financial situation
Reference income	-0.052*	-0.231***	-0.097***	0.380***	-0.106***
	[0.039]	[0.033]	[0.042]	[0.031]	[0.054]
(High)*Reference I.					0.023***
					[0.008]
log likelihood	-7594	-9925	-6543	-11104	-7585
Observations	19859	25742	17105	28335	19859
Number individuals	4265	5529	3629	6025	4265

***Source:** INSEE.* ***Controls**:* lagged individual income, marital status, number of children, household size, high for column 2. Reference income is the estimated value of log real individual income. Bootstrapped standard errors for reference income, main effect and interactions (1000 replications). Standard errors in brackets.

Satisfaction with financial situation*: "Could you indicate on a scale from 1 to 6 your degree of satisfaction for your financial situation?" (columns 1 and 2).*
Resources*: "Considering the monthly resources of your household, would you say that they allow you to live: 1. with great difficulty, 2. with difficulty, 3. quite difficultly, 4. quite easily, 5. easily, 6. very easily". Variable collapsed into two categories.*
Situation improved*: "Considering your current financial situation with that of last year (same month), would you say that it has: - 1.improved a lot, - 2. improved a little, - 3. not changed, - 4. worsened a little, - 5. worsened a lot". Variable collapsed into two categories.*
Consumption*: "Now I want to ask you a question about the current economic situation. Would you say that the current time is favourable for a large-scale purchase? – 1. favourable, - 2. neither favourable, nor defavourable, - 3. defavourable". Variable collapsed into two categories.*
High*: individual income is above the average of the reference group.*

Table VII.A Satisfaction and Reference Income in the United States
Ordered Logits

	1	2	3	4	5	6
	Happiness	Life exciting	Happiness	Life exciting	Happiness	Life exciting
Reference Income	0,090***	0,307***	0.054**	0.307***	0.089***	0.307***
	[0,015]	[0,019]	[0.024]	[0.036]	[0.015]	[0.018]
Log Real Household 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]
Easy to Find Job			0.017***	0.023***		
			[0.002]	[0.003]		
Upward Mobility/Parents					0.016***	0.010**
					[0.003]	[0.004]
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	-10645	-4953	-28343	-17312

Source: *General Social Survey*, 1972-2001. Certain variables are not available before 1974 and in 2001 (rounds 1, 2 and 24). Reference income is the estimated value of log real individual income in constant $. Bootstrapped standard errors for reference income (1000 replications). Standard errors in brackets.
Controls: age, age square, sex, marital status, number of children, year dummies.
General Happiness : *" very happy/pretty happy/not too happy"*
Life is: "*dull/routine/exciting"*
Easy to find job: "*could respondent easily find an equally good job: (very easy/somewhat easy, not too easy)"*
Upward Mobility: "*respondent's living standard compared to parents: much better/somewhat better/ about the same/somewhat worse/much worse*", collapsed into 2 categories *much better + somewhat better* versus the remaining answers.

Table VII.B Controlling for Status Effects in the United States
Ordered Logits

	1	2	3	4	5	6	7	8	9	10	11	12
	Happiness	Life exciting	Happiness	Life	Happiness	Life	Happiness	Life	Happiness	Life	Happiness	Life
Reference Income	0.090***	0.307***	0.031*	0.189***	0,061	0.201***	0.041***	0.255***	0.065***	0.271***	-0,052	0.368***
	[0.015]	[0.019]	[0.017]	[0.023]	[0.050]	[0.064]	[0.015]	[0.021]	[0.015]	[0.019]	[0.074]	[0.094]
Log Real Household Income	0.161***	0.148***	0.154***	0.135***	0.143***	0.153***	0.121***	0.109***	0.083***	0.085***	0.195***	0.142***
	[0.009]	[0.011]	[0.009]	[0.011]	[0.028]	[0.037]	[0.009]	[0.011]	[0.009]	[0.012]	[0.045]	[0.055]
Opportunity to advance											0.332***	0.272***
											[0.065]	[0.085]
Family income below average									0.199***	0,049		
									[0.032]	[0.040]		
Family income average									0.458***	0.190***		
									[0.031]	[0.040]		
Family income above average									0.563***	0.410***		
									[0.035]	[0.045]		
Family income far above average									0.535***	0.533***		
									[0.056]	[0.076]		
Subjective class identification							0.210***	0.239***				
							[0.011]	[0.014]				
Self ranking of social position (10 points scale)					0.106***	0.108***						
					[0.013]	[0.016]						
Prestige score			0.004***	0.007***								
			[0.001]	[0.001]								
Observations	31698	21140	31698	21140	2890	1914	30917	21045	31512	21016	1532	1008
Pseudo R2	0,04	0,03	0,04	0,04	0,06	0,05	0,05	0,04	0,05	0,04	0,05	0,04
log likelihood	-28356	-17315	-28337	-17268	-2526	-1518	-27449	-17083	-27963	-17105	-1286	-752

Source: *General Social Survey*, 1972-2001. Certain variables are not available before 1974 and in 2001 (rounds 1, 2 and 24).
Controls: age, age square, sex, marital status, number of children, year dummies.
Standard errors in brackets. Reference income is the estimated value of log real individual income in constant $. Bootstrapped standard errors for reference income (1000 replications).
General Happiness : "very happy/pretty happy/not too happy" **Life is**: "dull/routine/exciting"
Respondent's occupational prestige score.
Subjective class identification: *lower class/working class/middle class/upper class*
Opinion about family income: "*far below average* (reference category), *below average, average, above average, far above average*".
Respondent has the opportunity to advance: strongly agree/agree/neither /disagree/strongly disagree

Table VIII. The Demand for Redistribution in Europe

Ordered Logits

Panel A	1	2	3	4	**Panel B**	5
Eastern countries	-0,888***	-0,118***	-0,203***	-0,220***		
	[0,087]	[0,034]	[0,036]	[0,036]	**Income mobility**	-0.006***
						[0.002]
Country dummies	Yes	No				
Satisfaction with the government, democracy, the economy			Yes		**Income mobility * East**	-0.017***
Health self-evaluation				Yes		[0.005]
Observations	32327	32327	30530	30516	Observations	24036
Pseudo R2	0,06	0,04	0,04	0,04	Pseudo R2	0,03
log likelihood	-37857	-38955	-36747	-36707	log likelihood	-28916

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"*.

Panel A. Source: *European Social Survey* (2002).
Controls: age, age square, gender, income categories, household size, child at home, education categories, employment status, countries dummies, (1) countries dummies + east dummy, (2) only east dummy, (3) satisfaction with the government, with democracy, with the economy, (4) health self-evaluation. **Eastern countries:** Czech republic, Hungary, Poland, Slovenia.

Panel B. Source*: European Social Survey* (2002) + *ECHP data + Polish and Hungarian household panels, 21 countries,* **East**=*Poland + Hungary.*
Controls : age, age square, household income, employment status, household size, gender.
Income mobility index= (average number of decile change per individual)^2 , per country, over the period 1994-2001, calculated with the ECHP data and Hungarian and Polish household panels.

Annex. 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 France

	Number of Observations	**Individual income**		**Household income**		**"Could you indicate on a scale from 1 to 6 your degree of satisfaction with your financial situation?" (%)**							
Year		Average	Standard deviation	Average	Standard deviation	Year	Not at all	Not	Quite dissat.	Quite Sat.	Sat.	Very	Total
1994	8720	56730	71759	96875	128980	1994	12	10	23	27	25	3	100
1995	13230	52020	57551	90943	105756	1995	11	11	25	28	23	2	100
1996	12533	50576	52812	89444	89602	1996	12	11	25	28	22	2	100
1997	11914	52280	60263	93683	107008	1997	10	11	24	29	24	2	100
1998	10313	62911	63091	107505	100325	1998	9	9	24	31	24	2	100
1999	9383	62853	66871	107532	103395	1999	9	9	24	31	26	2	100
2000	9171	65060	67825	112918	112243	2000	8	8	24	31	27	2	100
2001	9157	68902	67369	118556	111517	2001	7	9	22	32	28	2	100

Source: INSEE, French component of ECHP.

Table A.IV Russia: Income Categories and Life Satisfaction (RLMS)

Total real household income	Nb observations	Mean	Std.dev.	Life satisfaction (%)	Not at all satisfied	Less than satisfied	Both yes and no	Satisfied
Round 5	4081	8260	7550	Round 5	23	44	20	13
Round 6	4081	6481	6239	Round 6	29	39	21	12
Round 7	4081	6219	7283	Round 7	32	38	20	10
Round 8	4081	4846	4944	Round 8	38	35	17	10
Round 9	4081	6068	7970	Round 9	24	39	22	15
Total real household expenditure	**Nb observations**	**Mean**	**Std.dev.**	**Individual monthly income[1]**	**Mean**	**Std.dev.**		
Round 5	4081	10949	10275	Round 5	167904	227529		
Round 6	4081	9121	9372	Round 6	314045	508328		
Round 7	4081	8156	9688	Round 7	396623	769885		
Round 8	4081	6042	7200	Round 8	483	768		
Round 9	4081	7020	8107	Round 9	1230	1780		

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.V Hungary Satisfaction Categories, in % (TARKI Database)

Satisfied with life	1992	1993	1994	1995	1996	1997	Satisfaction with future perspectives	1992	1993	1994	1995	1996	1997	Satisfaction with living standard	1992	1993	1994	1995	1996	1997
Not satisfied at all	7	7	4	5	4	3	**Not satisfied at all**	14	13	7	9	8	6	**Not satisfied at all**	9	10	6	6	6	5
1	3	3	2	3	2	2	1	0	0	0	0	0	0	1	5	5	4	4	5	5
2	3	4	3	4	4	4	1	7	6	4	5	4	5	2	9	9	7	9	10	9
3	6	7	6	7	7	7	2	10	10	8	10	10	9	3	12	13	11	14	13	14
4	5	6	6	7	7	8	3	12	12	11	14	12	13	4	9	10	11	12	11	14
5	30	28	28	29	28	29	4	9	9	10	11	11	12	5	28	24	25	26	26	25
6	9	11	13	12	13	12	5	22	20	22	23	23	24	6	8	9	12	10	11	11
7	11	11	13	14	15	14	6	8	9	12	9	11	9	7	7	8	10	8	9	9
8	14	14	16	14	15	15	7	7	8	11	9	10	11	8	8	8	9	7	7	6
Fully satisfied	12	10	9	6	6	5	8	8	9	11	8	9	9	**Fully satisfied**	5	4	4	3	2	2
							Fully satisfied	5	4	4	3	2	2							
Total	100	100	100	100	100	100	Total	100	100	100	100	100	100	Total	100	100	100	100	100	100

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 the following things. If you are not at all satisfied, give 0; if you are completely satisfied, give 10. How satisfied are you with: 1. your future opportunities,. 2. your standard of living,. 3. your income , 4. life up to now, the course of your life ?".*

In the next 12 months, the financial condition of your family will:						
In %	**1992**	**1993**	**1994**	**1995**	**1996**	**1997**
Worsen a lot	4	6	2	6	5	6
Worsen	35	43	22	52	42	40
About the same	32	39	43	29	36	41
Improve	13	12	18	6	11	13
Improve a lot	0	0	0	0	0	0
Don't know	15	0	15	7	6	0
Total	100	100	100	100	100	100

Expectations*: "How do you think that the financial position of your family will change in the next 12 months: 1. will improve considerably, 2. will improve, 3. will not change, 4. will get worse, 5. will get much worse."*

Hungary. *"Do you think that a good job is a secure job or a well-paying job?"*

%	1992
A secure job	83
A well-paid job	17
Total	100

Available only for round 1.

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

Year	Real household income		Real household expenditure		Real individual income		Nb Observations
	Mean	**SD**	**Mean**	**SD**	**Mean**	**SD**	
1992	440143	686982	20948	12676	126076	339102	7265
1993	392759	277014	19805	11386	112117	141032	6674
1994	387486	302570	20175	11287	111236	179577	6220
1995	349754	256735	19044	10692	99458	136663	5493
1996	314314	238490	19633	14551	89484	119508	4807
1997	299465	282622	19651	10791	89325	177487	3778

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

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

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.IX Baltic Countries (NORBALT Household Surveys)

		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
Income categories in Euros		**Estonia**	**Latvia**	**Lithuania**
Household income	mean	343	293	240
	sd	301	299	192
Individual income	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.X American General Social Survey

	Real individual Income in Constant $		Real Household Income in Constant $		Life is :					Respondent is :					Number observations
Year	**Mean**	**Std. Dev**	**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	1,613
1973	31362	22397			1973	5,1	49,4	45,5	100	1973	13,1	51,1	35,9	100	1,504
1974	32125	23988	22534	20544	1974	4,7	51,8	43,5	100	1974	13,1	49	37,9	100	1,484
1975	29404	22256	18731	15471					100	1975	13,1	54,1	32,9	100	1,49
1976	28274	21368	20570	18348	1976	3,7	51,6	44,8	100	1976	12,5	53,4	34,1	100	1,499
1977	32641	29325	21929	25923	1977	6,8	48,9	44,4	100	1977	11,9	53,2	34,8	100	1,53
1978	30178	25723	20288	18857						1978	9,6	56,1	34,3	100	1,532
1980	31333	27256	22666	23831	1980	5,6	48,4	46	100	1980	13,3	52,7	33,9	100	1,468
1982	24546	20668	17692	16162	1982	6,6	50,2	43,1	100	1982	14,5	54,9	30,6	100	1,86
1983	30693	29432	18638	16030						1983	12,8	56,1	31,2	100	1,599
1984	28299	24026	19002	17640	1984	5	48,2	46,8	100	1984	12,9	52,3	34,7	100	1,473
1985	30434	27736	21245	21592	1985	6,5	45,6	47,9	100	1985	11,4	60	28,6	100	1,534
1986	28539	25023	19546	18368						1986	11,4	56,3	32,3	100	1,47
1987	28110	23270	19343	17131	1987	4,6	51,5	44	100	1987	13,4	57,5	29,1	100	1,819
1988	28917	23953	19660	16541	1988	5	50	45,1	100	1988	9,3	56,8	34	100	1,481
1989	30969	24889	19947	16541	1989	5,3	50,2	44,5	100	1989	9,7	57,7	32,6	100	1,537
1990	33096	29715	20436	20328	1990	5	50,1	45	100	1990	9	57,6	33,4	100	1,372
1991	26911	21661	19379	18018	1991	4,2	51,5	44,3	100	1991	11	58	31,1	100	1,517
1993	32577	30568	21754	21108	1993	6,5	47,1	46,5	100	1993	11,1	57,3	31,6	100	1,606
1994	31136	26879	20455	18670	1994	4,2	48,4	47,4	100	1994	12,2	59	28,8	100	2,992
1996	31991	27299	21374	19447	1996	4,2	45,9	50	100	1996	12,1	57,5	30,4	100	2,904
1998	30558	26556	21974	23358	1998	5,5	49,4	45,1	100	1998	12,1	56,1	31,8	100	2,832
2000	33227	33941	22110	22513	2000	4,9	48,7	46,4	100	2000	10,6	57,7	31,7	100	2,817
2002	34930	35834			2002	3,7	44,2	52,1	100	2002	12,4	57,3	30,3	100	2,765
					Mean	**5,1**	**49**	**45,9**	**100**	**Mean**	**12,1**	**55,9**	**32,1**	**100**	**43,698**

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
	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/)