AMBITION AND JEALOUSY.

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

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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

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). 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 (δV / δE^A . δE^A / δY^B); a positive sign suggests that the information effect[1] (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]).

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[2].

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*[3]. 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 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 III presents and discusses the results; Section IV concludes.

II. 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.

1. Data

The choice of databases is guided by the requirement that they include satisfaction variables and, if possible, be panel[4]. 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[5] (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.

2. 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, 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[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], 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 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. 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[7].

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[8]. 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.

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)[9]: 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)[10]. 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 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[11] 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 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)[12]".

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[13] 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.

IV. 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[14], 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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Endnotes

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[1] 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.

2 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.

3 See Senik [2005] for more references.

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, I use ordered probit models.

7 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.

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

9 See Senik (2004b for the corresponding tables).

10 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.

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 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.

13 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.

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

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*"

.

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 (ECHP)**	1	527	788
	3	621	779		4	345	560		2	552	785
Greece	1	192	393		5	354	568		3	563	784
	2	196	398		6	368	591	**United Kingdom (BHPS)**	1	572	773
	3	204	416		7	391	625		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
							UK								UK
(%)	Germany	Denmark	Netherlands	Belgium	Luxembourg	France	ECHP	Ireland	Italy	Greece	Spain	Portugal	Austria	Finland	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/)